Report No. FAA-RD-77-57, I



# HELICOPTER NOISE MEASUREMENTS DATA REPORT

Volume I Helicopter Models: Hughes 300-C, Hughes 500-C, Bell 47-G, Bell 206-L



April 1977 Data Report



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Prepared for

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION
Systems Research & Development Service
Washington, D.C. 20590

AD NO.

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FAA/OFFICE OF ENVIRONMENTAL QUALITY - identification of the program requirement.

FAA/SYSTEMS RESEARCH AND DEVELOPMENT SERVICE, AIRCRAFT SAFETY AND NOISE ABATEMENT DIVISION, ENVIRONMENTAL RESEARCH BRANCH - provided the overall management, test direction and data analysis.

DOT/TRANSPORTATION SYSTEMS CENTER, NOISE MEASUREMENT AND ASSESSMENT LABORATORY - provided the microphone systems and operators, data acquisition and data reduction.

ICAO/INTERNATIONAL CIVIL AVIATION ORGANIZATION - initiated the interest in establishing a possible helicopter noise certification procedure.

HAA/HELICOPTER ASSOCIATION OF AMERICA - supported the FAA effort and encouraged industry participation.

FAA/NATIONAL AVIATION FACILITIES EXPERIMENTAL CENTER (NAFEC) - provided the portable theodolite system and operator.

DULLES INTERNATIONAL AIRPORT/OPERATIONS CHIEF - cooperation in allowing Dulles to be used as a test site.

NASA LANGLEY RESEARCH CENTER/Aircraft Noise Research and Rotocraft Research Divisions - provided support for the test program, one of the test helicopters (S-61) and crew and also allowed their airfield to be used as a test site.

BELL HELICOPTER - arranged for several of their helicopters to be used in the test program (Bell 47G, 206L, and 212).

HUGHES HELICOPTER - arranged for two of their helicopters to be used in the test program (Hughes 300C and 500C).

SIKORSKY HELICOPTER - arranged for two of their helicopters to be used in the test program (Sikorsky S-61 and S-54 "Skycrane").

BOEING VERTOL - arranged for one of their helicopters to be used in the test program (CH-47C "Chinook").

- U. S. AIR FORCE/ANDREWS AIR FORCE BASE, MARYLAND provided the Bell 212 (Units) helicopter and crew.
- U. S. ARMY/FT. EUSTIS, VIRGINIA provided the Sikorsky S-64 "Skycrane" (CH-54B) helicopter and crew.
- U. S. ARMY/NEW CUMBERLAND, PENNSYLVANIA provided the Boeing Vertol CH-47C helicopter and crew.

William ATAILS

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# FEDERAL AVIATION ADMINISTRATION HELICOPTER NOISE TEST PROGRAM - NOISE DATA PACKAGE

#### INTRODUCTION

At the request of the Office of Environmental Quality (AEQ), the Environmental Research and Development Branch, ARD-550 conducted a helicopter noise test to obtain noise level data to provide a data base for a possible helicopter noise certification rule. The helicopter industry, the U. S. Air Force and U. S. Army provided the test helicopters and crew while the Federal Aviation Administration/ Department of Transportation (FAA/DOT) provided the test management, data acquisition, reduction, analysis and reporting.

The noise data presented in this two volume report is primarily intended as a means to disseminate the available information to the helicopter manufacturers and other interested organizations. Only the measured data is presented in this report. All FAA/DOT data analysis and comparisons will be presented in a later report which is scheduled for distribution in July, 1977.

#### TEST PROCEDURE

The test procedure for each helicopter consisted of obtaining noise data during hover, level flyover, and approach conditions. During the hover portion of the test each helicopter was operated with a wheel clearance of about 5 feet and rotated with reference to the microphone array to record the noise levels at each 45° interval around the helicopter. Each angular location was marked so that the pilot could visually maintain the proper heading. Figure 1 describes the nomenclature used to identify the microphone locations in relation to the helicopter's heading. Additional noise data was obtained at a 500 foot hover location. However, because of the windy conditions and the difficulty in keeping the helicopter positioned directly over the microphone array, only a limited amount of data was obtained at this altitude.

During the level flyover portion of the test, each helicopter was flown over the microphone array at an altitude of approximately 500 feet (150 meters) at airspeeds of 90, 100 and 110 percent of the best economical long range cruise speed and at an approach airspeed of about 60 Kts.

Approaches were flown at target glide slopes of 3, 6, and 9 degrees such that the altitude of the helicopter as it passed over the microphone array was held constant at 400 feet. A portable theodolite was

used to establish the approach glideslopes and verbal "fly-up/fly-down" commands were given to the pilot in order to keep the helicopter decending along the proper glideslope. This procedure proved to be satisfactory and the approaches were performed with a high degree of accuracy. Figure 2 schematically describes the operation showing the relative location of the theodolite with respect to the microphone array for each of the different glideslopes. All approaches were flown at a constant airspeed of either 60 mph or 60 Kts (depending on the nomenclature of the onboard airspeed indicator - usually mph for civilian operated helicopters and Kts. for military operated helicopters).

Most approaches and level flyovers were repeated several times to determine the degree of data repeatability achievable. The helicopter airspeed and altitude were monitored directly from the on-board instrumentation while photographic techniques were used to check the helicopters altitude as it passed directly over the microphone array.

#### MICROPHONE INSTRUMENTATION AND LOCATION

During hover the microphone array consisted of four microphones, two on each side of the hover location at distances of 246 feet (75 meters) and 492 feet (150 meters). For the 500 feet hover, the level flyovers and approaches, the microphone array consisted of both sideline locations of 492 feet and two centerline microphones directly below the flight path of the helicopter. All microphones were mounted four feet above

the ground (per FAR 36 requirements) along a line perpendicular to the flight path. Figure 3 shows the details of the microphone arrangement.

For this helicopter noise test program, four identical measuring systems were used. The microphone systems, data acquisition and data reduction was provided by the DOT Transportation Systems Center (TSC) Noise Measurement and Assessment Laboratory. Each system consisted of a General Radio Model 1962-9601, 1/2 - inch pressure sensitive random incidence electret-condenser microphone with a B&K Model UA-0237 windscreen. In addition, a General Radio Model P42 Microphone Preamplifier was used to amplify the output of the microphone and provide impedance maching so that long cables could be used between the microphone/preamplifier combination and the recording system without signal loss or degradation in frequency response. The microphones were mounted four feet above the ground and oriented so that their diaphram was essentially in a plane perpendicular to the flight path of the aircraft (grazing incidence).

The data was recorded on two, two channel Nigra IV SJ Scientific Tape Recorders using Scotch 888 recording tape. The recorders were operated in a direct mode at a tape speed of 7.5 inches per second. A third track on each recorder was used for voice annotations which consisted of the run number, flight conditions before each run and a verbal marker used to identify the time at which the helicopter passed over the microphone array.

Field calibrations of the microphone/recorder system were performed every hour using a General Radio 1562-A Sound Level Calibrator which generates a 1000 Hz tone at a sound pressure level of 114 dB. In addition, a passive microphone simulator was substituted for the actual microphone to determine the minimum discernable sound pressure level (noise floor) of the system. The dynamic range of the measuring system was approximately 55 dB.

A Climatronics Model EWS Electronic Weather Station was used to continuously monitor and record the temperature, humidity, wind speed and direction. The wind sensors were located at a height of ten feet above the ground while the temperature and humidity sensors were located at a height of five feet.

#### TEST SITES

The helicopter noise tests were conducted at two different sites. Five of the helicopters were tested at Dulles International Airport while the remaining three were tested at NASA Langley Research Center (LaRC) at Hampton, Virginia.

The test area at Dulles Airport was the old Transpo site north of the terminal and east of runway 1 left--19 right. The test area was bounded on the west by the taxiway to the east of 1L-19R, on the south by the center of the terminal parking lot, on the east by the eastern edge of

the terminal parking lot (north-south portion of the access road), and to the north by Route 606. The noise tests were conducted within these boundaries which provided a test area of approximately 3500 feet wide by 12,000 feet long. The surface of the test area consisted of a combination of decomposing asphalt, dirt and gravel. This surface was somewhat soft for a depth of about 2 inches and then become hard such that markers could only be driven in with some difficulty. Because of this surface, one of the centerline microphones (designated as-centerline west/hard surface) was installed over a hard plywood surface 16 feet long and 4 feet wide. The test site at Dulles Airport is described in Figure 4. All testing took place between the hours of 7:30am and 4:30pm with occasional interference from commercial and general aviation activity at the airport. As a result, it was necessary to abort several runs because of the noise interference generated by the takeoff and landing of these aircraft.

The test site at NASA LaRC was located at the north end of runway 17-35 with the flight path of the helicopters centered along the east edge of the runway. During the 5 foot hover portion of the test, three of the four microphones were located over concrete while the fourth microphone (designated-75m east sideline/soft surface) was located over grass about three inches high. During the 500 foct hover, level flyovers and approaches the main centerline microphone used in most of the data analysis (designated-west centerline/hard surface) was located over concrete while the alternate centerline microphone was over grass. Figure 5 shows the test site in relation to the NASA LaRC

airfield. Intermittant noise interference from military aircraft takeoff and landings from Langley Air Force Base (adjacent to the NASA LaRC) posed some delays.

#### HELICOPTER DESCRIPTIONS

The eight helicopters tested during this Helicopter Noise Test

Program constituted a wide range of gross weights and included participation from several helicopter manufacturers. Helicopter availability was initated by the manufacturers and obtained from user organizations including private business, the military and company demonstration models. The helicopter models used in the test program were:

HELICOPTER MODEL	MILITARY DESIGNATION	TEST DATE	TEST LOCATION
Hughes 300C		10/14/76	Dulles Airport
Hughes 500C	<del></del>	10/28/76	NASA Langley
Bell 47G		10/5/76	Dulles Airport
Bell 206-L		10/14/76	Dulles Airport
Bell 212	UHIN	10/6/76	Dulles Airport
Sikorsky S-61	SH-3A	10/28/76	NASA Langley
Sikorsky S-64 ("Skycrane")	CH-54B	10/28/76	NASA Langley
Boeing Vertol ("Chinook")	CH-47C	10/13/76	Dulles Airport

Figure 6 contains a table of the general characteristics of each helicopter.

Use of the Bell 47G and 206L and the Hughes 300C and 500C were arranged by the area representative of Bell Helicopter and Hughes Helicopter respectively. The Sikorsky S-61 (SH-3A) was provided by the NASA LaRC at Hampton, Virginia. The Bell 212 (UHIN) was provided by the U.S. Air Force from Andrews Air Force Base in Maryland, the Sikorsky S-64 "Skycrane" (CH-54B) was provided by the U. S. Army from Ft. Eustis, Virginia, and the Boeing Vertol (CH-47C) was provided by the U. S. Army from New Cumberland, Pennsylvania. All helicopters were tested at or near their maximum gross weight. In most instances this required the use of additional ballast. For the smaller helicopters this required the use of a few hundred pounds of ballast in the form of lead bars. However, for the larger helicopters the problem of ballast was solved in various ways. The Sikorsky S-61 provided by NASA was heavily instrumented because the helicopter is used for various research projects. The Sikorsky S-64 "Skycrane" carried an army truck for ballast which could be easily detached from the helicopter. As a result it was possible to test the S-64 "Skycrane" both with and without the army truck (a difference of approximately 13,500 lbs.). In the case of the Boeing Vertol CH-47C two empty 600 gallon fuel tanks were mounted inside the fuselage of the helicopter and filled with water to give additional ballast of approximately 10,100 lbs. Figure 7 contains a detailed list of the weight components that comprise each helicopters total gross weight during testing.

All helicopters tested during this program consisted of a single main rotor system except for the Boeing Vertol CH-47C which utilizes a tandem rotor system. Figures 8 through 15 are photographs of each of the helicopters tested.

#### DATA REDUCTION SYSTEM

The noise data plus the calibration signal that were recorded on the magnetic tape were fed into a modified General Radio 1921 Real Time Analysis System made up of a General Radio 1925 Multitilter and General Radio 1926 Multichannel RMS Detector. The necessary gain adjustments were made in the multifilter using the recorded calibration signals.

The GR-1925 Multifilter consisted of a set of parallel contiguous 1/3 octave filter channels from 25 Hz to 10 KHz plus a standard "A" weighted network, a standard "D" weighted network and an unfiltered channel with a flat frequency response to provide Overall Sound Pressure Levels (OASPL). All outputs from the multifilter were fed into the GR-1926 Detector which sampled and computed the RMS level in dB for each channel for a 1/2-second measurement period. These levels were then converted to digital outputs and were fed into the Wang 720C computer which was programmed to store the digitized data in the Wang 730 Disc System. The analysis system has a dynamic range of 60 dB.

Data stored in the Wang 730 Disc System was processed as follows:

Hover Test -- Data from thirty-eigh+ (38) 1/2-second integration

periods were averaged together on an energy basis and data

printed out for the average level, the maximum level and the

minimum level versus 1/3 octave frequency bands (25Hz to 10 KHz),

plus the OASPL, PNL, PNLT and the "A" and "D" weighted noise
levels.

Level Flyover and Approach Tests -- The data stored on the disc was processed according to FAR 36 procedures without corrections for temperature, humidity or aircraft position for each level flyover and approach condition. The processed noise levels consisted of the Effective Perceived Noise Level (EPNL), the Maximum Perceived Noise Level (PNL(M)), the Maximum Tone Corrected Perceived Noise Level (PNLT(M)), the maximum "A" weighted noise level (dBA(M)), the maximum "D" weighted noise level (dBD(M)) and the Maximum Overall Sound Pressure Level (OASPL). In addition, the processed data includes a sime history of PNL, PNLT, dBA, dBD and OASPL at 1/2-second time intervals during flyover plus the 1/3 octave band spectra for about ten 1/2-second intervals during the flyover including the spectra at maximum PNL. The 1/3 octave band spectra are time referenced to the helicopters visual overhead position.

#### NOISE DATA

The data packages containing the noise level measurements obtained during this Helicopter Noise Test Program are presented in this and the accompanying volume:

HELICOPTER MODEL	VOLUME	DATA PACKAGE	TEST DATE	TEST SITE
Hughes 300C	I	Α	10/14/76	Dulles Airport
Hughes 500C	I	В	10/28/76	NASA Langley
Bell 47G	I	С	10/5/76	Dulles Airport
Bell 206L	I	D	10/14/76	Dulles Airport
Bell 212 (UHIN)	II	E	10/6/76	Dulles Airport
Sikorsky S-61 (SH-3A)	11	F	10/28/76	NASA Langley
Sikorsky S-64 (CH-54B "Skycrane")	II	G	10/28/76	NASA Langley
Boeing Vertol (CH-47C "Chinook")	II	н	10/13/76	Dulles Airport

Because of the limitations of time and the large amount of data recorded, not all of the measured data from the four microphone systems has been reduced. However, a good representative sampling of the data has been reduced and is presented in these data packages. Each of the eight data packages has been arranged in the following format:

#### SECTION I - Run List

This section lists the runs which have been reduced along with any general comments about the data.

#### SECTION II - Ground and Flight Log Data

This section contains a summary of the helicopter operational data from the ground and flight logs for each run. It lists the run number and time for each run, the target test conditions, the actual test conditions taken from the on-board instrumentation, periodic ground weather conditions and any comments which might apply to each run. This section also contains the maximum dBA noise levels obtained from an on-line metering system. For the larger helicopters (S-61, S-64 and CH-47C) whose gross weights during testing were greatly affected by their rate of fuel consumption, an additional table has been inserted which provides a log of the total gross weight as a function of time.

#### SECTION III - Meteorological Data

This section lists the temperature, barometric pressure, relative humidity, wind speed and wind direction at periodic time intervals during the test.

#### SECTION IV - Helicopter Level Flyover and Approach Noise Data

This section contains the EPNL levels and the maximum dBA, dBD, PNL, PNLT and OASPL noise levels for selected runs calculated according to FAR 36 procedures without corrections for temperature, humidity or aircraft position. In some instances where it was impossible to obtain the 10 dB down points because of the noise

floor of the data acquisition system, no EPNL levels are calculated.

Defintion of the tabulated data are as follows:

Event -- Test run number

ţ

EPNL -- Effective Perceived Noise Level

dBA(M) -- Maximum "A" weighted level

dBD(M) -- Maximum "D" weighted level

OASPL(M) -- Maximum Overall Sound Pressure Level

PNL(M) -- Maximum Perceived Noise Level

PNLT(M) -- Maximum Tone Corrected Perceived Noise Level

DUR(P) -- period between 10dB down points on PNLT time history (in seconds)

LEQ -- Equivalent Noise Level for single event flyby (energy mean, averaged over period of DUR(A))

TC -- Tone Correction (tones below 500 Hz excluded)

#### SECTION V - Time Histories

This section contains the tabulated 1/2-second interval time histories of dB(A), dB(D), OASPL, PNL and PNLT for each of the selected microphones over the period of level flyover or approach as determined by the 10dB down points of the PNLT time history. Each numerical indices represents a 1/2-second interval of time. The time at which the helicopter passes directly over the microphone array is indicated in the left hand margin (by the initials 0.H.--Over Head).

#### SECTION VI - 1/3 Octave Band Spectra--Flyover and Approach

This section contains the 1/3 octave band spectra data for flyover and approach for as many as ten different 1/2-second intervals of time both before and after the helicopter passes overhead. The point at which the helicopter was observed as being directly over the microphone array is indicated as zero time. The time (in seconds) before the helicopter reaches the overhead position is indicated as negative and the time after passing overhead is indicated as positive. All times are relative to the helicopter's overhead position. The numbers 17 through 40 represent the 24 1/3-octave bands (50-10,000 Hz). In addition, the corresponding dBA, dBD, OASPL, PNL and PNLT noise levels are included.

#### SECTION VII - 1/3 Octave Band Spectra - Five Foot Hover

This section contains the 1/3 octave band spectra data for the 5 foot hover test conditions averaged over a 19 second time interval consisting of thirty-eight 1/2-second integration periods. Data is printed out for the average level, the maximum level, the minimum level, the arithmetic average and the standard deviation for each of the 27 1/3-octave bands from 25 Hz to 10 KHz. In addition, the corresponding dBA, dBD, OASPL, PNL and PNLT noise levels are included. The angular location found in the title following the run number (event number) indicates the heli-

copter heading. Using the hover directivity nomenclature described in Figure 1, the correct microphone angular location relative to the helicopter are determined and indicated in the right hand margin.

#### SECTION VIII - Maximum dBA Noise Levels

This section contains the maximum dBA noise levels for all runs and all microphone locations. This data was obtained prior to the computerized output format and constituted our initial quick-look analysis. The recorded noise data was run through a noise level meter with the maximum RMS dBA noise level for each run visually noted and transcribed in the enclosed table. For the hover data, the angular location described by the helicopter operation denotes the helicopter's heading. The microphone location relative to the helicopter is expressed in parenthesis.

#### SECTION IX - Selected dBA Time Histories - Graphic Plots

This section contains graphic time histories of selected data runs for hover, level flyover and approach. The triangular mark on the time histories indicates the point at which the helicopter passes over the microphone array.

**←** %

OME IS FROM NOSE CLOCKWISE TO MICROPHONE

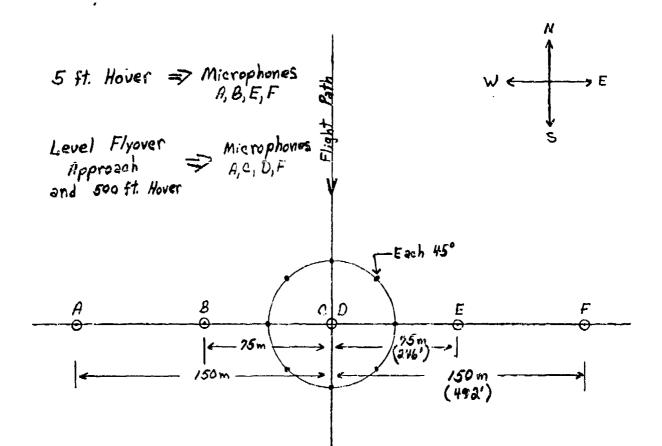
	90° 135° 180° 325° 270° 315°	180° 135° 90° 45° 0° 345°	0 315" 270" 226" 180" 135"		Z↔·	9, 215°	× ← (+++++++++++++++++++++++++++++++++++	Avest-125	135º HEADING	રેલ્	9 - 135°	W-A + DE	Quest 315	315 HEADING
	Helicopter Heading 0° 45°	WEST Mic (Owest) and asso	EAST Mic (O East) 90° 45°		<b>~</b> ←	O <sub>EAST</sub> Co	WATER TO THE	OWEST - 1900	90° HEADING	Ζ+-	5° (\$180°	WALL CASE	ewesr = C° ↓	270° HEADING
)	- 06 × 13	-95m 1	S=180°		<b>≷</b> ←		W- (+C+) + ) -+E	6 west = 2250	45° HEADING	<b>≷</b> ←	Gray = 335°	3 - ( ) - ) - M	Quest = 45°	225 HEADING
	W= 270°	- 1 - 25m - 1	phone	Arcel	° ° • •	or the state of th	M + + + + + M	Quest = 270° E	O HEADING	<b>≷←</b>	A Grast 470°	¥ ↑ (+) → x	Over : 90 -	180° HEADING

Portable Theodolite 2500' (%)
3750' (6) Microphone \$ Altitude
Determined
for each
Glide Slope
~600' to 1000 Landmark 17

PROCEDURE APPROACH

## HELICOPTER NOISE TEST

MICROPHONE ARRAY



## Dulles Airport

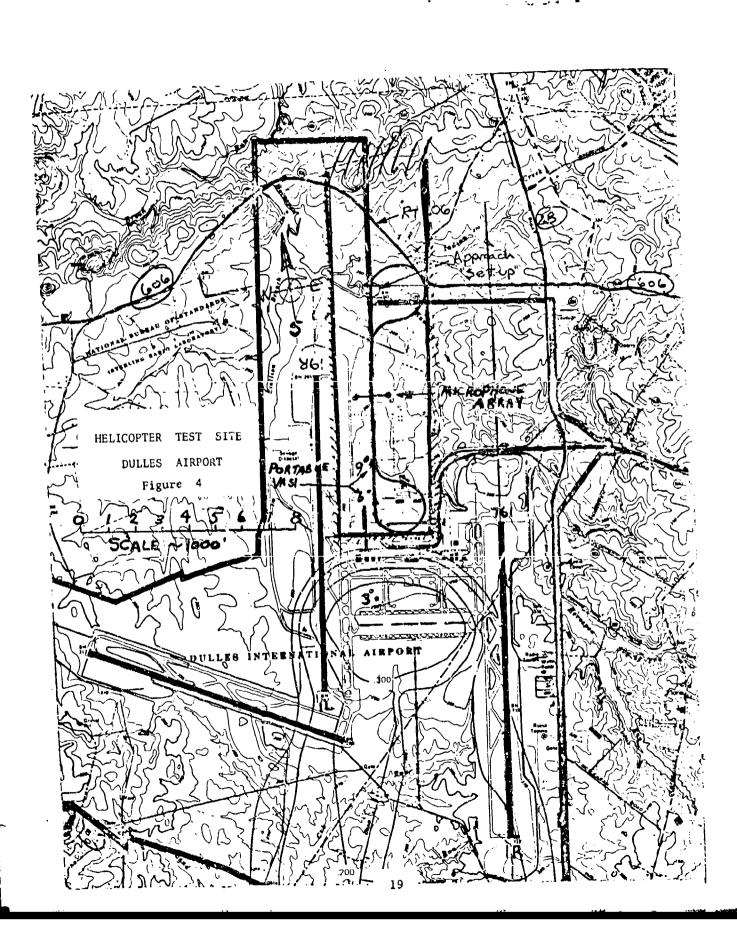
Microphones A, B, D, E, F
located over surface consisting
of a combination of decomposing
asphalt, dirt and gravel

Microphone C located over hard plywood surface

#### NASA Langley

Microphones A, B, C, F
located over concrete surface

Microphone D, E located over grass



BACK RIVER LAMGIEY RESEARCH CENTER NASA LANGLEY RESEARCH CENTER Connecting Roads & HELICOPTER TEST SITE Entrance Gales March 1972

Figure 5

#### HELICOPTER CHARACTERISTICS

rigure 6				1		
MANUFACTURER	HUGHES		HUGHES		BELL	
MODEL	300C		500C		47G	
MILITARY DESIGNATION		!				
POWER FLANT	AVCO-Lyco HIO-360-D		Allison 250-C20A		AVCO-Lyco TVO-435-0	
TYPE .	4-Cylinde Reciproca	r ting Engine	Turboshaf	t	6-Cylinde Reciproca	er ating Engine
RATED OUTPUT AT SEA LEVEL	190 shp a 3200 RPM		400 shp a 6000 RPM		220 shp a 3200 RPN	
EMPTY WEIGHT (1bs)	1025		1086		1892	
MAX. T.O. GROSS WEIGHT (1bs)	1900		2550		2950	
FUEL CAPACITY (gellons)	19		61.5		57	
MAXIMUM AIR SPEED (mph)	105 (91 K	(ts)	152 (132	Kts)	105 (91 1	(ts)
ECONOMIC CRUISE SPEED (mph)	100 (87 K	(ts)	143 (124	Kts)	83 (72 Ki	ts)
MAXIMUM RANGE (miles)	255		377		250	
FUSELACE LENGTH (ft.)	30.92		23		31.58	
PASSENGER CAPACITY	3		6		3	
	MAIN ROTOR	TAIL ROTOR	MAIN ROTOR	TAIL ROTOR	MAIN ROTOR	TAIL ROTOR
NUMBER OF BLAVES	3	2	4	2	2	2
DIAMETER (ft.)	26.83	4.25	26.33	4.25	37,125	5.83
AREA DISK (sq.ft,)	565.5	14.2	544.6	14.2	1083	26.8
MAX. GROSS WT./AREA (1b/sq.ft)	3.36		4.7		2.72	
CHOPD LENGTH (inches)	6.75	4.86	6.75	4,86	11	4.94
AREA PER BLADE (sq.ft.)	7.55	.86	7.41	.85	17.14	1.20
BLADE LOADING (1b./sq.ft.)	1.12		1.17	<del>-</del> -	1.36	
ROTOR RPM	471	3094	484	3110	370	2160
BLADE PASSAGE FREQ. (Hz)	24	103	32	104	12	72
TIP SPEED (ft./sec)	661	690	667	692	719	658
		1		 	l	

Figure 6		HELICOPTER	CHARACTER	ISTICS		
MANUFACTURER	BELL		BELL		SIKORSKY	
MODEL	206L		212		S-61	
MILITARY DESIGNATION			UHIN		SH-3A	
POWER PLANT	Allison 250-C20B			Whitney 'Twin-Pac'	2-Gen. Ele T58-GE-8B	ectric
ТҮРС	Turboshaf	t	Two PT6 Turbosha	ft Engines	Turboshaft	t
RATED OUTPUT AT SEA LEVEL	420 shp a 6000 RPM		1800 shr 6600 RF		1250 shp a 19,500 RPM	
EMPTY WEIGHT (1bs.)	1894		6000		11,865	
MAX. T.O. GROSS WEIGHT (1bs.)	3900		10,000		20,500	
FUEL CAPACITY (gallons)	98		215		700	
MAXIMUM AIR SPEED (mph)	150 (130	Kts)	121 (10	S Kts)	166 (144	Kts)
FJONOMIC CRUISE SPEED (mph)	136 (118	Kts)	100 (87	Kts)	136 (118	Kts)
MAXIMUM RANGE (miles)	370		296		625	
FUSELAGE LENGTH (ft.)	33.9		41,9		54.75	
PASSENGER CAPACITY	7		15		15	
	MAIN ROTOR	TAIL ROTOR	MAIL RUTOR	TAIL ROTOR	MAIN ROTOR	TAIL ROTOR
NUMBER OF BLADES	2	2	2	2	5	5
DIAMETER (ft.)	37	5.17	48	8.5	62	10.33
AREA DISK (sq. ft.)	1074.7	20.97	1809	56.7	3019	83.9
MAX. GROSS WT./AREA (lb./sq.ft.)	3.63		5.53		6.79	
CHORD LENGTH (inches)	13	5.25	21	11.5	18.25	5.7
AREA PER BLADE (sq. ft)	18.05	1.13	42	4.07	44.54	2.46
BLADE LOADING (1b./sq. ft.)	1.82		2.76		1.36	
ROTOR RPM	394	2550	324	1662	203	1136
BLADE PASSAGE FREQ. (Hz)	13	85	11	55	17	95
	1	1	1	J	1	I

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21 b

TIP SPEED (ft./sec.)

# HELICOPTER CHARACTERISTICS

1	İ		!
MANUFACTURER	SIKORSKY		BOEING VERTOL
MODEL	S-64 "Sk	ycrane"	114 "Chinook"
MILITARY DESIGNATION	СН-54В		CH-47C
POWER PLANT	2-Fratt JFTD-12A	& Whitney -5A	2-AVCO-Lycoming T55-L-11
ТҮРЕ	Turbosha	ft	Turboshaft
RATED OUTPUT AT SEA LEVEL	4,800 sh (each en		3750 shp at 15,680 RPM (ea. eng.)
EMPTY WEIGHT (1bs.)	19,234		20,378
MAX. T.O. GROSS WEIGHT (1bs)	47,000		45,000
FUEL CAPACITY (gallons)	880		1129
MAXIMUM AIR SPEED (mph)	127 (110	Kts)	190 (165 Kts)
ECONOMIC CRUISE SPEED (mph)	100 (95	Kts)	158 (137 Kts)
MAXIMUM RANGE (miles)	253		230
FUSELAGE LENGTH (ft.)	70.25		51
PASSENGER CAPACITY	4		33-44
		•	
•	MAIN ROTOR	TAIL ROTOR	TANDEM ROTOR
NUMBER OF BLADES	6	4	3
DIAMETER (ft.)	72	16	60
AREA DISK (sq. ft.)	4070	201	2826/each
MAX. GROSS WT./AREA (1b/sq.ft.)	10.3		7.96
CHORD LENGTH (inches)	26	15.4	25.25
AREA PER BLADE (sq.ft.)	78	10.27	63.1
BLADE LOADING (1b./sq.ft.)	1.71		1.33
ROTOR RPM	186	852	245
BLADE PASSAGE FREQ. (Hz)	18.6	57	3 Blades/Rotor => 12 5 Blades/Helicopter => 24
TIP SPEED (ft./sec.)	700	714	755

HELICOPTER MODEL	EMPTY Weight	THDIAN	BALLAST	INSTRUMENTATION AND CREW	MAXIMUM T.O. GROSS WEIGHT	GROSS WEIGHT DURING TEST
HUGHES 300 C	1025	130	200	450	1900	1800
HUGHES 500 C	1086	400	0	364	2550	1850
BELL 47-G	1892	370	200	388	2950	2850
BELL 206-L	1894	640	456	435	3900	3420
BELL 212 (UH1N)	0009	1400	400	1800	10,000	0096
SIKORSKY S-61 (SH-3A)	12,224	3000	0	3500	19,000	18,725
SIKORSKY S-64 (CH-54B) "SKYCRANE"	19,234	6600	13,500 (Army Truck)	3600	47,000	42,900
BOEING VERTOL (CH-47C) "CHINOOK"	20,400	0069	10,100 (1200 gal. water)	3600	45,000	41,000

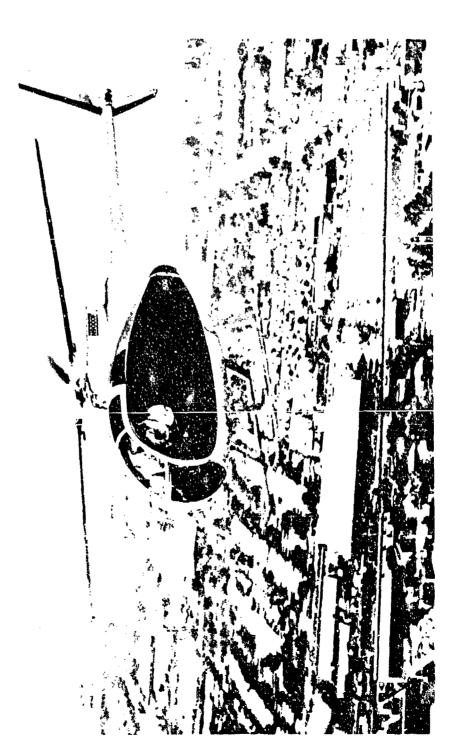
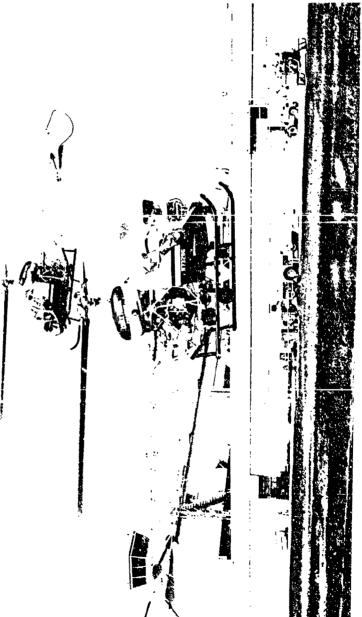
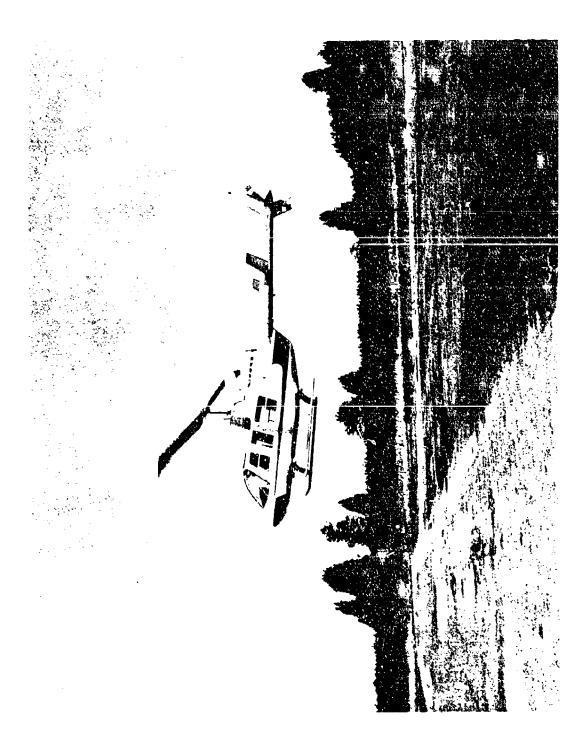
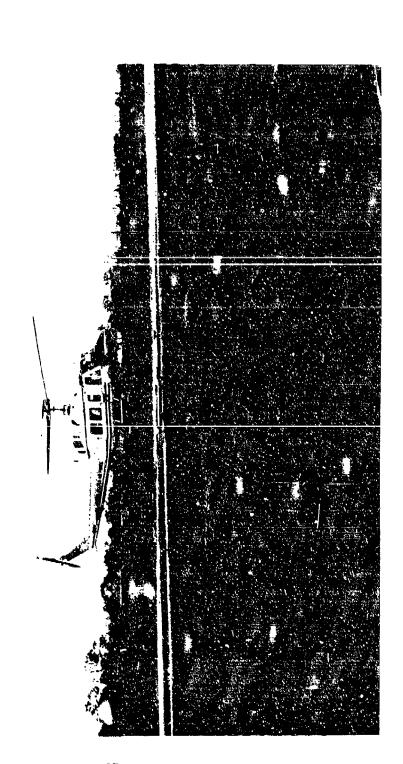


Figure 9





BEIL 206-L



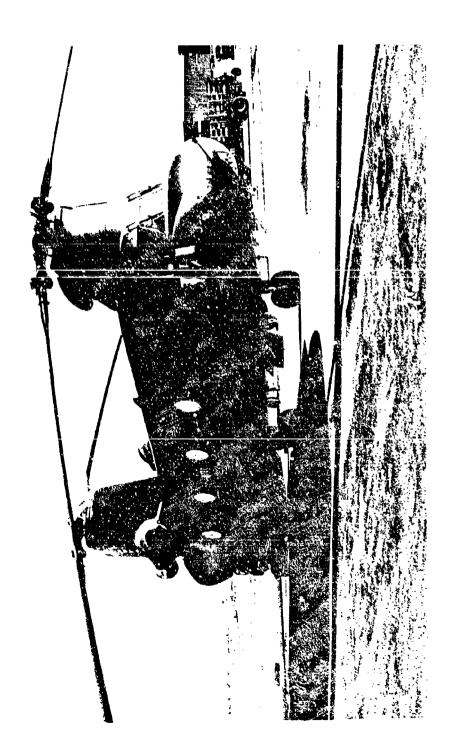
BELL 212 (UHLN)

SIKORSKY S-61 (SH-3A)

Figure 13

SIKORSKY S-64 "SKYCRANE" (CH-54B)

Figure 14



### DATA TABLE A

### HUGHES 300C

TEST DATE: _	10-14-76 TEST SITE: DULLES	AIRPORT
SECTION - A	CONTENT	PAGE #
I	RUN LIST	31
n	GROUND AND FLIGHT LOG DATA	34
III	METEOROLOGICAL DATA	36
IV	LEVEL FLYOVER AND APPROACH NOISE DATA	37
v	TIME HISTORIES	39
VI	1/3-OCTAVE BAND SPECTRAFLYOVER AND APPROACH	59
IIV	1/3-OCTAVE BAND SPECTRA5 FOOT HOVER	79
VIII	MAXIMUM dBA NOISE LEVEL (ALL RUNS)	98
IX	SELECTED dBA TIME HISTORIESGRAPHIC PLOTS	101

THE NOISE LEVELS PRESENTED IN SECTIONS IV, V AND VI

HAVE BEEN TABULATED FOR THE SELECTED RUNS AND MICROPHONE

LOCATIONS INDICATED ON THE FOLLOWING PAGE.

TABLE A-I
LIST OF RUNS SELECTED FOR ANALYSIS

				MICROPHONE	LOCATION		
			WES	ST	EAST		
RUN#	TEST CONDITIO	N	150 m SIDELINE	CENTER LINE	CENTER LINE	150m SIDELINE	
26	Level Flyover	60 mph			x		
27					х		
28		. 4			х		
29		69 mph	} 	·	x		
30		Ţ			х		
31		76 mph	x		х	x	
33			x		x	x	
34		•	x		x	x	
35		82 mph			x		
36					x		
37		1			х		
40	₩	90 mph			x		
44	6° Approach	60 mph			x		
58	9° Approach	60 mph			х		
	Microphone Loca	ations	Over Transpo site surface	Over plywood	Over Transp site surfac	Over Transpesite surfac	
			32				

### GENERAL COMMENTS

THE SE STATE OF THE SECOND CONTRACTOR OF THE PROPERTY OF THE PERSON OF T

- o No data was taken for the 3° approach condition.
- o Weather conditions were windy with gusts in the 10-20 mph range.
- o Because of the wind noise and the low helicopter noise levels of the Hughes 300 C it was difficult to obtain the 10 dB down points necessary to calculate the Effective Perceived Noise Levels (EPNL) for the level flyover conditions.

Test Date: Oct. 14,19%		Comments	Abort		Slightly than		Abort			
7	(2)	Used Direction		····						
	er (10 f.)	Wind Speed		-			·			
	Ground Weather	RH				·	· · · · · · · · · · · · · · · · · · ·		 -	
	Graund	Temp								
		7#0							 ·	
•		RPM	3000	3300	8 →		1.1			
Number:	540	Altitude	38 →	\$ \$ \$	#60 <del>#.</del>		\$ \$ \$			
	Conditions	Ap or Tongue	***	* \$ * &	19° 185° 19.5°		, # ^	# <u></u>		
Registration	Aetus/		0	0->	111		l  .	omplette D A.A.		
	1	S Bir		00	₹d03	oltions.	\$-	to complete by 11:00 A.M.		
		Hearing	14712140	12 13 8 8	10	Level Flyover Con	100→	3 00g/		
300 B		484	%; -1 67.0	25.0 75.0	76.3 77.0 77.0	/ F/you	1 %	the August pilot had to		
			\$; & →	\$00\$	\$>		\$-> \$->	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$		
Hugh	Conditions	Velocity Attitude	8	0 ->	9	ested a	9-	14. all		
Model: Hughes	Taset	Type	Leng!	Hover	.° .° .°	\$06 L Tested at	ide of	Wind toe strong for 90 Approach abo, the		
elicopter 1		Time	9.57 8:58 8:58	10:01 10:01	10:12 10:16 10:18	18e1	10:51 10:55	8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8		
e lico,		Run Time	8 8 6 9 0 4	¥ ¥	出まる	95-9	জ <b>ধ</b>		 	. =

TABLE A-III

# METEOROLOGICAL DATA DUILES INTERNATIONAL AIRPORT OCTOBER 14, 1976

TIME	TEMP.	BAR. PRESS.	REL. HUM.	WIND SPEED	WIND DIRECTION	REMARKS
(Hours)	(°F)	(mm Hg)	(%)	(mph)	(Degrees)	
0845	52		38	6-10	310	
0900	53	757	37	6-12	320	Sky-Clear
0915	54		36	10-12	310	
<b>U930</b>	54		34	8-14	310	
0945	55		34	6-16	315	
1.000	55		34	7-18	330	
1015	55		34	10-22	320	
1030	56		34	12-15	310	
1045	56		34	12-21	320	
1100	56		34	8-20	330	
1115	56		34	10-18	330	
1130	56		34	8-15	320	
1145	57		34	8~15	310	
1200	58		33	10-23	310	
1215	57		33	8-16	320	
1230	57		32	10-18	320	
1245	58		32	10-18	330	
1300	59		32	12-15	340	
1315	59		31	10-14	320	
1330	60		30	10-13	<b>29</b> 0	

### HELICOPTER APPROACH AND FLYOVER NOISE DATA

HUGHES 300 C

OCTOBER 14 1976

#### MICROPHONE OFFSET 150 METERS WEST (LEVELS-DB RE 20 MICRO PA)

EVENT	EPNL	DBA(M)	DBD(M)	OASPL	PNL(M)	PNLT(M)	LEQ	DUR (A)	DUR (P)	TC
31		66.9	71.0	74.8	79.0	79 • 3				1.6
33		67.6	73.9	85 • 7	79.9	79.9	62 • 1	32.0		•0
34		67 • 4	71.5	75 • 8	79 • 1	79 • 1				•0
EVENT	EPNL				50 METE MICRO P PNL(M)	A)	LE <b>q</b>	DUR(A)	DURCPO	TC
31		67.3	71.4	80•8	78 • 8	79.1		er 00 <b>1</b>	~	1.0
33		68 • 4	72.1	79.0	79.6	79.6	64.5	26.5		•0
34		66 • 1	70.1	80.2	77.8	77.8		no es es		•0

<sup>---</sup> INSUFFICIENT DATA - 1008 DOWN POINTS NOT DISCERNIBLE ABOVE AMBIENT LEVELS

### HELICOPTER APPROACH AND FLYOVER NOISE DATAA

HUGHES 300 C

OCTOBER 14 1976

CENTERLINE MICROPHONE ( SOFT SITE )
(LEVELS-DB RE 20 MICRO PA)

EVENT	Ebur	DBA(M)	DBD (M)	OASPL	PNL(M)	PNLT(M)	LEQ	DUR(4)	DUR (P)	TC
26 27		68•5 69•0	73•9 74•4	79•5 77•1	83 • 1	83 • 1		***		•0
28		70.3	74.4	78 • 8	83•5 81•8	83 • 5 81 • 8	65 - 0	27.0		•0
29 30		69 • 7 66 • 6	74 - 1 71 - 4	76 • 4 73 • 6	81-5	81.5	64 • 8			٠Û
31		67.2	72.2	75•7	79•6 80•0	80•0 80•0	62 • 6	30.0		1 • 1
33 <b>34</b>		69•2 70•1	73·5 75·3	77 • 8 77 • 9	81•8 82•9	81 • 8 82 • 9	65 • 0 66 • 1			•0
35		66+9	71.4	75.7	79•3	79 • 3	63 • 3	26.0 26.0		•0
36 37		66•7 66•6	71 • 6 71 • 6	74•4 76•4	79•4 79•3	80 • 5 <b>79 •</b> 3	62.7			1 • 1
40		68.3	73.2	76.7	80 • 7	80 • 7	61·9 62·9			•0
44 58	82 • 2 84 • 6	71 · 1 76 · 2	75•9 80•7	79•1 81•7	82•9 87•6	<b>82•9</b> 88•3	65•9 72•0		24.5 13.5	•0

<sup>---</sup> INSUFFICIENT DATA - 10DB DOWN POINTS NOT DISCERNIBLE ABOVE AMBIENT LEVELS

NO DATA - CENTERLINE MICROPHONE ( HARD SITE )

LI A. L. L. CUPY

### TABLE A-I

### NOISE LEVEL TIME HISTORY DATA

### HUGHES 300 C

OCTOBER 14 1976

#### EVENT 31. 76 MPH FLY BY. MIC. 150 METERS WEST

101	D84	080	UASPL	<b>50</b> 0	PNLT	PNL-DBA	DBD-DB4
1	52 • 2	62.2	70•3	71.8	71 •8	19.6	10.0
4	51.7	61.3	67.4	71.7	71 • 7	20.0	9.6
7	53 • 1	61.4	65 • 1	72.0	72.0	18.9	8 * 3
10	56.0	63.9	69•0	73.0	73.0	17.0	7•9
13	60 • 3	66 • 7	71.7	75.0	75.0	14.7	6 • 4
16	58 • 3	65 • 6	70.2	74.2	74.2	15.9	7•3
19	58 • 6	66 • 1	69+5	74.7	74.7		7.5
22	55.0	63.8	68 • 4	72.7	72.7	17.7	8 • 8
25	55•6	63.5	71 • 1		72 • 7	17 • 1	
28	54.2	62.6	67•9	72.3	72.3	18 • 1	
31	61.4	66.2	70 • 4		75•9	13.5	
34	56.2	63 • 3	67.4	72.7	72•7	16.5	7 • 1
3 <b>7</b>	59•4	65•2	69 • 4	74.0	74.0	14.6	5 • 8
40	55•3	62 • 9	67•6	72.4	72.4	17 • 1	7 • 6
43	61.9		69 • 4		76•7		4.6
46	63.2	67.6	70 • 4	76.2	77.9		
49	64.2		73.3	77.1	78•3		
52	66 • 7	70•5	73 • 4	78•7			3 • 8
55	65 • 4	69.9	73.2	77.9	77.9	12.5	4 • 5
<b>5</b> 8	66 • 1	70.7			<b>7</b> 8•8	12.7	4.6
OH $\frac{61}{3}$ 63		70.0	74 • 1	77.8	77.8	11 + 7	3.9
64	66•9	70 • 4	73.6		77 • 6	10.7	3 • 5
67	66.5	70 - 1	73.2	77 • 7	77 • 7	11.2	3 • 6
70	65.0	69 • 4	73.8	76.9	76.9		4.4
<b>7</b> 3	63.8	68•5	71.7	76.4	76 • 4		
76	64.7	68 • 8	71.3	76.7	76•7	12.0	4 • 1
79	65•0	68 • 8			76 • 4	11.4	3 • 8
82	63.0	67.5	71.5	75 - 1	75 - 1	12.1	4 2 5
85	60.8		71.6	73.7	75 - 1	12.9	4.7
88	59•7	64.8	70 • 6	73.3	73.3		5 • 1
91	57 • 1		71.2	72.7	72.7		6.6
94	59 - 1	63.9	70•3		74.6		
		•					

### NUISE LEVEL TIME HISTORY DATA

### HUGHES 300 C

OCTOBER 14 1976

### EVENT 33, 76 MPH FLY BY, MIC. 150 METERS WEST

INT	DBA	DBD	OASPL	PNL	PNLT	PNL-DBA	DBD-DBA
1	55.7	63 • 8	72.7	72.9	72.9	17.2	8 • 1
3	54.2	63 • 4	72.5	72.5	72.5	18.3	9.2
5	54 • 5	63.2	71.1	72.4	72.4	17.9	8.7
7	57 • 5	64.2	70.0	73.2	73.2	15.7	6.7
9	57.8	64.6	70.9	73.3	73.3	15.5	6.8
11	<b>57</b> - 0	63.9	71.3	73.1	73 - 1	16.1	6.9
13	57.3	64.0	71 - 7	73 - 1	73-1	15.8	6.7
15	56•3	64.4	72.9	73.0	73.0	16.7	8 • 1
17	56 • 4	64.8	73.9	73.3	73.3	16.9	8 • 4
19	59•3	66•6	76.6	74.6	74.6	15.3	7.3
21	59•4	66.7	76.2	74.7	74.7	15.3	7 • 3
23	57 • 7	65 • 5	74.1	73.6	73 • 6	15.9	7.8
25	60 - 1	66 • 4	73 • 1	74.9	74.9	14.8	6•3
27	58 • 6	66.0	75.6	74 • 1	74 - 1	15.5	7 • 4
29	57 • 4	65•5	74.7	73.6	73.6	16.2	8 • 1
31	58•9	66•8	76.5	74.7	74.7	15.8	7.9
33	60•3	67 • 8	78 • 1	75.3	75•3	15.0	7•5
35	62.3	68•3	76.0	76 • 4	76.4	14.1	6.0
37	64.2	69•7	76.2	77•5	77.5	13.3	5 • 5
39	66 • 4	72.3	80.9	79 - 1	79 • 1	12.7	5•9
OH41	66 • 5	73.9	85•3	79.9	79•9	13.4	7 • 4
43	66 • 4	73.2	84.5	79•7	79•7	13.3	6•8
45	67.2	72.7	81.4	79•5	79•5	12.3	5•5
47	67 • 4	72•5	80•6	79 • 6	79 • 6	12.2	5 • 1
49	64 • 8	70•2	79•2	77•6	77.6	12.8	5 • 4
51	63.3	68•5	76•9	76 • 4	76•4	13-1	5•2
53	62 • 8	68 • 1	76•6	75.8	75 • 8	13.0	5•3
55	61.8	67 • 8	77.5	75.2	75•2	13.4	6•0
<b>57</b>	60 • 3	66•6	76.5	74.5	75 • 6	14.2	6-3
59	60 • 0	65 • 4	73 • 1	73.8	74.8	13.8	5 • 4
61	56.8	65-4	76.8	73.4	73 • 4	16.6	8•6
63	56 • 9	64.9	75.7	73.4	73 • 4	16.5	8 • 0
65	55.0	63 • 1	71.8	72.5	72.5	17.5	8 • 1
67	59.6	65 • 3	75 • 1	73.8	75 • 1	14.2	5•7
69	59.7	64.9	72.6	73.5	73.5	13.8	5•2
71	56 • 8	63.8	74 • 1	72.8	72.8	16.0	7.0
73	56 - 1	63.6	74+3	72 • 6	72 • 6	16.5	7•5
75	55.2	64.5	76.7	72.5	72.5	17.3	9•3
77	53.8	63.2	74.6	72.1	72 • 1	18.3	9 • 4

### NOISE LEVEL TIME HISTORY DATA

### HUGHES 300 C

OCTOBER 14 1976

EVENT 34, 76 MPH FLY BY, MIC. 150 METERS WEST

INT	DBA	DBD	UASPL	PNL	PNLT	PNL-DBA	DBD-DBA
1	51-4	59+2	63.7	68 • 4	68 • 4	17.0	7 • 8
4	59 • 1	66 • 1	72.5	74.1	74-1	15.0	7.0
7	59.2	66.6	74 • 1	75.0	75.0	15.8	7 • 4
10	54.8	63 • 4	71.1	72.4	72 • 4	17.6	8.6
13	54.5	63.2	70 • 3	72.4	72.4	17.9	8.7
16	57 • 3	64.8	71.2	73.6	73.6	16.3	7.5
19	56 • 8	64 • 4	69•3	73.1	73 • 1	16.3	7.6
22	60 • 6	66 • 8	75 • 1	74.8	74.8	14.2	6•2
25	58.3	65 • 1	73 • 1	73.3	73 • 3	15.0	6•8
28	62.8	67 • 4	72.1	75.6	75∙6	12.8	4.6
31	62 • 7	67.5	74.2	75.8	75•8	13-1	4.8
34	62.9	68+0	72.4	76 • 1	76 • 1	13.2	5 • 1
37	62.9	67.5	72.5	76.0	76•0	13-1	4 • 6
40	64.3	69•3	72•7	77.8	79•0	13.5	5•0
43	64.2	69.2	72.5	77.4	77•4	13.2	5•0 <sub>/</sub>
46	65 • 1	69•5	71-8	77.2	77•2	12.1	4.4
49	64.8	69 • 1	72.5	76.9	76•9	12.1	4 • 3
OH> 52	67 • 4	71.5	72.6	79.1	79-1	11.7	4.1
55	66.5	70•9	71.9	78•4	78 • 4	11.9	4•4
58	63 • 4	68•5	71.0	76.2	76.2	12.8	5 • 1
61	64.4	69•0	70 • 7	77.0	77.0	12.6	4.6
64	64.1	68.8	70.0	76.4	76•4	12.3	4.7
67	62 • 6	67 • 4	70•2	75•7	75 <b>•7</b>	13.1	4•8
70	62.4	67 - 1	69.2	75•3	75•3	12.9	4.7
73	59•5	64.8	68•3	73.5	73 • 5	14.0	5•3
76	60 • 6	65•8	67•6	73•9	74.9	13.3	5•2
79	60 • 1	64.8	67 • 4	73.4	74.5	13.3	4.7
82	58 • 4	64.4	68•7	73.2	73•2	14.8	6•0
85	58.0	64.0	67 • 1	72.9	72.9	14.9	6•0
88	58•5	63.5	64.8	72.9	72.9	14.4	5•0

#### NOISE LEVEL TIME HISTORY DATA

### HJGHES 300 C

OCTOBER 14 1976

EVENT 31, 76 MPH FLY BY, MIC. 150 METERS EAST

INT	DBA	מצע	UASPL	PNL	PNLI	PNL-DBA	DBD-DBA
1	54 • 3	63 • 2	77.0	72.0	72•0	17.7	8•9
3	54.9	63 • 0	73.5	72.3	72 • 3	17.4	8 • 1
5	56•2	63.5	73.5	72 • 6	73 • 6	16.4	7 • 3
7	57 • 1	64.5	77.4	<b>72•</b> 8	74.1	15.7	7 • 4
9	59•9	65 • 8	77.7	74•0	74•0	14.1	5•9
11	57 • 4	64 • 1	75•2	72.9	72•9		6•7
13	62 • 4	66•7		75•5	77•2		4.3
15	62.7			75.7	77•3		4.5
17	62•5	67 • 1		75•8	75•8		4.6
19	63 • 6	68 • 2		76•7	77.8		4.6
21	62 • 4	67.5	77•2	75 • 5	76•9		5 • 1
23	63.0	68 <b>•</b> 5	78.4	76•0	77 • 1	13.0	5•5
25	63 • 1	68 • 1	78.6	76.0	76.0	12.9	5.0
27	64-1	68•7	77.3	76•3	76•3	12.2	4.6
29	<b>66∙2</b>	70 • 1	78•7	77•8	77.8	11.6	3.9
31	66.2	70.2	80.0	77•8	77.8	11.6	4.0
33	67 • 1	70•7	80 • 4	78•4	78 • 4	11.3	3 • 6
oH <del>&gt;</del> 35	66•2	70 • 3	78•3	77•9	77•9	11.7	4-1
37	66•5	70 • 5	77 • 8	78 - 1	79+1	11.6	4.0
39	67 • 1	71.0	79•3	78•5	76 • 5	11.4	3•9
41	66-1	70 • 6	78•5	<b>7</b> 8 • 1	78 • 1	12.0	4.5
43	64 • 4	69•0	77•6	76•7	76•7	12.3	4.6
45	65.5	69.9	77.0	<b>77•</b> 5	77•5	12.0	4.4
47	65•8	70 • 1	77 • 4	77•9	77•9	12.1	4.3
49	65•9	70•5	78•3	78 • 1	78 • 1	12.2	4.6
51	64.7	69•6	78•8	77 • 1	77 • 1	12.4	4.9
53	63.2	68•6	78 • 1	<b>76•</b> 3	77+6	13.1	5•4
55	63.8	69•1	77 • 5	77.0	77.0	13.2	5•3
57	63•7	69•2	77•5	77.0	77.0	13.3	5•5
59	60 • 1	66 • 7	78•3	74.3	75.7	14.2	6•6
61	59 <b>•5</b>	66•7	80.8	74.0	74.0	14.5	7.2
63	58∙3	64-9	78 • 4	73 • 3	73 • 3	15.0	6 • 6
65	58.9	64.2	74.3	73 • 1	74.8	14.2	5 • 3
67	59.3	64.7	75.3	73.2	75 • 1	13.9	5 • 4
69	57.5	64•6	78 • 4	72•9	72.9	15.4	7 • 1

### NOISE LEVEL TIME HISTORY DATA

HUGHES 300 C

OCTOBER 14 1976

EVENT 33, 76 MPH FLY BY, MIC. 150 METERS EAST

1N1	DBA	מפת	OASPL	PNL	PNLT	PNL-DBA	DBD-DBA
1	56 - 9	64-2	75•1	73.0	74.5	16-1	7•3
3	57.9	64.1	72.2	73 • 1	74.4	15.2	6.2
5	58 • 1	63.9	72.0	73.2	74.5	15.1	5.8
7	58 • 3	63•6	71.4	73 - 1	74.9	14.8	5•3
9	59-0	63.8	72.0	73.2	74.9	14.2	4.8
11	58 • 1	63•9	73.9	73.0	74.2	14.9	5 • 8
13	58•3	63.9	73.2	73.3	73.3	15.0	5 • 6
15	61.7	65•6	70.5	74.4	75.5	12-7	3.9
17	58•9	64.6	71.2	73.6	75.0	14-7	5.7
19	58•6	65.0	73.3	73 • 7	74.7	15 • 1	6 • 4
21	63•9	67.4	73.7	76-1	77.6	12.2	3.5
23	64-1	68 • 1	74.2	76.2	76.2	12.1	4 • 0
25	65•2	68•9	75 • 3	76•8	76.8	11.6	3 - 7
27	63•5	67•8	77 - 1	75•6	76 • 6	12.1	4.3
29	63.9	68 • 4	79.0	76.2	76.2	12.3	4.5
31	65.9	69•6	77.9	77.5	77.5	11.6	3 • 7
33	66 • 1	69.6	75.3	77 • 7	78•7	11.6	3.5
35	66.7	70.3	74.6	78.2	78•2	11.5	3 • 6
37	65 • 1	69•7	74.8	77.9	77•9	12.8	4 • 6
39	67 • 1	71.2	74.4	78.7	78 • 7	11.6	4 • 1
OH>41	68•2	72.1	75.6	79.5	79.5	11.3	3.9
43	67 • 9	72.1	74.6	79.4	79.4	11.5	4.2
45	67 • 4	71.4	73.5	78.9	78•9	11.5	4.0
47	66•9	71 - 1	74.6	78.5	78•5	11.6	4.2
49	65.2	69.5	75•3	77+5	77•5	12.3	4.3
51	63.9	68•6	72•8	76 • 7	76•7	12.8	4.7
53	63.3	68 • 1	72.8	76 • 5	76•5	13.2	4.8
55	60 • 5	66•2	73.9	74 - 4	75 • 5	13.9	5.7
<b>57</b>	58.5	65.0	73.6	73.5	73.5	15.0	6 • 5
59	58 • 5	64.8	73.6	73.6	73 • 6	15.1	6 • 3
61	57.7	64 • 6	73.2	73.3	74 - 4	15.6	6•9
63	57.8	63•9	70•7	73 • 2	73.2	15.4	6 • 1
65	55•8	62.4	69•6	72.5	72•5	16.7	6•6

# TAGLE A-V

NOISE LEVEL TIME HISTORY DATA

HUGHES 300 C

OCTOBER 14 1976

EVENT 34. 76 MPH FLY BY, MIC. 150 METERS EAST

INT	DBA	DBD	OASPL	PNL	PNLT	PNL-DB4	DBD-DBA
1	52 • 4	60.8	66•6	71 • 7	71.7	19+3	8 • 4
3	52 • 1	61.2	67 • 4	71.8	71.8	19.7	9.1
5	54.7	62.3	68.0	72 - 3	72.3	17.6	7.6
7	56 • 5	63 • 4	68 • 1	72.7	72.7	16.2	6.9
9	56∙6	63.6	68.9	72.9	72.9	16.3	7.0
11	57.4	64 • 1	69.6	73.2	73.2	15.8	6 - 7
13	59•5	64 • 6	71.6	73.5	73.5	14-0	5-1
15	57.8	64.2	71.6	73.2	73+2	15.4	6.4
17	61.5	66 • 4	71.8	75 • 1	76.4	13.6	4.9
19	61.2	66 • 1	71.0	75 • 1	75 - 1	13.9	4.9
21	60.7	65.5	70.2	74.5	74.5	13.8	4.8
23	60•6	65.7	72.4	74-1	75 • 7	13.5	5.1
25	63 • 1	67 • 6	72.6	75.9	75.9	12.8	4.5
27	61.5	66.7	73.5	75.0	76.0	13.5	5.2
29	63+0	67.2	73.3	75.8	76.8	12.8	4.2
31	63 • 1	67.4	73.5	75.8	75.8	12.7	4.3
33	60•9	66 • 1	73.5	74.4	74.4	13.5	5.2
35	61 • 8	66.5	75 <b>•7</b>	74.7	74.7	12.9	4.7
37	63.9	68.3	77.1	76 • U	76.0	12 • 1	4.4
39	64.8	69 • 4	77.7	76.9	76.9	12.1	4.6
41	64.4	68•9	77.0	76.5	76.5	12.1	4.5
43	64.3	68.9	76•2	76.8	<b>76</b> • 8	12.5	4.6
OH-> 45	64.9	69.8	76 • 1	77.5	77.5	12.6	4.9
47	65•6	70.0	76 <b>•</b> 8	77.8	77.8	12.2	4.4
49	66•0	70.0	76•6	77.6	77 • 6	11.6	4.0
51	63.5	68 • 1	75 • 5	76 • 3	76.3	12.8	4.6
53	62 • 7	67.5	74.8	75 • 7	75 • 7	13.0	4.8
55	63.0	68.0	73.8	76 - 1	76 • 1	13.1	5.0
57	63.8	8.86	72.3	76 • 4	76.4	12.6	4.4
59	62.2	67 - 1	73.2	75.3	75.3	13-1	4.9
61	60 • 8	67.0	76 • 5	74.8	74.8	14.0	6.2
63	61.2	67.8	79.5	′ <b>7</b> 5•5	75.5	14.3	6.6
65	60 • 6	67.9	79.8	76 - 1	76 - 1	15.5	7.3
67	61 • 1	67•3	77.0	75.7	75.7	14.6	6.2
69	60 • 0	66 • 8	77.4	74.7	74 + 7	14.7	6.8
71	61.0	67.7	78 • 1	76.3	77.5	15.3	6.7
73	60 • 5	67 • 1	77.0	75.6	75.6	15.1	6.6
<b>7</b> 5	58.7	65•3	75•4	73.7	74.7	15.0	6.6
77	58 • 6	65•6	75•6	74.3	75.9	15.7	7.0

TAGLE A-I

### NOISE LEVEL TIME HISTORY DATA

HUGHES 300 C

CTOBER 14 1976

EVENT 24, 60 MPH FLY BY, CENTERLINE MIC. ( SOFT SITE )

INT	DBA	DBD	OASPL	PNL	PNLT	PNL-DBA	DBD~DBA
1	55 • 2	63.9	66•4	76 • 4	76•4	21.2	8 • 7
4	58 • 2	68.3	71 - 1	80.8	80.8	22.6	10.1
7	58.6	. 58•5	71.8	80 • 9	80 • 9	22.0	9.9
10	57.9	68.9	79.5	81.0	81 • 0	23.1	11.0
13	58 • 7			81.0	81.0	22.3	
16	61.3	69 • 4		81.2	81.2		8 • 1
19	64.5	70.7	74.3	81.7	81.7	17.2	
22	61 - 6	69-3		81.3	81.3	19.7	7.7
25	61.9			81.2		19.7	7.8
28	61.5	69.5		81.2		19.3	
31	63.6	70.5	70•3 72•7	81.5			-
34	65•2				81.5	17.9	6•9
-		71 • 4	74.2	81.9		16.7	6 • 2
37	64.9	71 • 3	74.6	81.7	81.7	16.8	6 • 4
40	65•6	71.6	74.7	81.9			
43	66 • 9	73.2	<b>75.</b> 2	82.3	<del>-</del>	15.4	6•3
46	67.5	73.7	77.0	82.7	82.7	15.2	6•2
OH <del>&gt;</del> 49	68 • 5	73.9		83.1	83 - 1	14.6	5 • 4
52	66.1	72.1		82.1	82•1	16.0	6•0
55	66 • 3	72.1	75.5	81.9		15.6	5 • 8
58	66+0	71.5	74.8	81.7	81.7	15.7	5•5
61	64.4	71 • 1	74.5	81 • 4	81 • 4	17.0	6.7
64	62.8	70 • 1	75.0	B1 • 1	81 • 1	18.3	7 • 3
67	60 • 6	69.2	72.0	80•8	80 •8	S0 • S	8 • 6
70	59 • 8	68 • 4	70.4	80.7	80.7	50.3	8•6
73	61 • 1	68•7	69 • 1	80.8	80.8	19.7	7.6
76	61 •8	69 • 1	71.9	81.0	81 • 6	19.2	7 • 3
79	60 • 1	68 • 7	71.5	80.9	80.9	20.8	8 • 6
88	57.0	67.9	70 • 6	80.8	80.8	8 • 8 \$	10.9

### NOISE LEVEL TIME HISTORY DATA

### HUGHES 300 C

OCTOBER 14 1976

EVENT 27, 60 MPH FLY BY, CENTERLINE MIC. ( SOFT SITE )

INT	DBA	DBD	OASPL	PNL	PNLI	PNL-DBA	DBD-DB4
4				_			
1	55 • 7	64 • 4	69.9	76 • 4	76 • 4	20.7	8•7
	59•6	68•5	70.8	80•9	80•9	21.3	8•9
7	57.6	67 • 7	69.5	80.7	80 <b>•7</b>	83•1	10 • 1
10	58.9	68 • 1	69•5	80.7	30.7	21.8	9•2
13	57 • 5	67.9	68•9	80•7	80•7	23.2	10 • 4
16	59•5	68+5	69+2	80 • 8	80 • 8	21.3	9+1
19	57.7	68.2	72.2	80.8	80•8	23.1	10.5
22	58•1	68 • 1	72.7	80•9	80.9	<b>2</b> 2 • 8	10.0
25	57 • 5	68.8	70•6	80.8	80 • 8	23.3	10.7
28	57 • 8	68 • 1	71.2	80 • 8	80.8	23.0	10.3
31	60 • 3	68.7	72.8	80•9	80•9	20•6	8 • 4
34	60 3	<b>6</b> 8•8	75 • 2	81.0	81.0	20.7	8 • 5
37	60 • 1	69+3	76•6	81.0	81.0	20.9	9.2
40	59•3	<b>6</b> 8 •8	74.0	81.0	81.0	21.7	9.5
43	59 • 1	68•5	70,7	80.9	80•9	21.3	9 • 4
46	59•9	69.0	73 • 4	81.1	81 • 1	21.2	9 • 1
49	61.9	69•5	70•9	81 - 1	81 • 1	19.2	7.6
52	66 • 8	71.9	74.6	82.4	82 • 4	15.6	5 • 1
55	61.5	69.5	73 • 1	81.1	81 • 1	19.6	8 • 0
58	65 • 5	71.7	75.2	81.7	81.7	16.2	6.2
61	64 • 8	71.4	74.8	81.6	81.6	16.8	6.6
64	65•5	71.9	74.5	81.8	81 • 8	16.3	6 • 4
67	65 • 8	71.8	74.7	82+0	82.0	16.2	6.0
70	65-1	71.7	73.7	81.7	81.7	16.6	6•6
73	67.7	73.4	74.3	82.4	82.4	14.7	5 • 7
OH <b>&gt;</b> 76	69•0	74.4	77 • 1	83.5	83.5	14.5	5 • 4
79	67 • 6	73.0	76 • 1	82.5	82.5	14.9	5 • 4
85	65•2	71 • 1	72.9	81 • 4	81 • 4	16.2	5.9
85	65.0	71 - 4	72.7	81.3	81.3	16.3	6 • 4
88	64.6	70.8	71.2	81.2	81-2	16.6	6.8
91	62.7	69.6	<b>7</b> 2•8	80.9	80.9	18.2	6.9
94	60 • 5	69.0	70 • 4	80.7	80.7	20.2	8 • 5
97	59 • 6	68.7	72.7	80.8	80 • 8	21.2	9.1
100	61.9	68•8	71 • 6	80 • 9	80.9	19.0	6.9
103	59.9	68.7	69.2	80.8	80.8	20.9	8.8
106	58 • 5	68 • 1	70•9	80.7	80.7	22.2	9•6
109	59.0	68.5	70.2	g0 • 7	80.7	21.7	9.5

### NOISE LEVEL TIME HISTORY DATA

### HUGHES 300 C

### OCTOBER 14 1976

#### EVENT 28. 60 MPH FLY BY. CENTERLINE MIC. ( SOFT SITE )

INT	DBA	DBD	OASPL	าดเ	PNLT	PNL-DBA	DBD-DBA
1	55•6	62.0	71 • 1	72.3	72 • 3	16.7	6 • 4
3	53.7	61.5	71.2	71.9	71•9	18.2	7.8
5	57 • <i>7</i>	63.0	70.7	73.0	73.0	15+3	5•3
7	60.3	64.5	70.2	74.1	75 • 3	13.8	4.2
9	60.8	65 • 1	70•0	74.7	76.0	13.9	4.3
11	60.4	65+3	70 - 0	75 - 1	75 - 1	1 4 - 7	4.9
13	62.5	66 • 8	70.8	76.0	77•5	13.5	4.3
15	61.1	66.0	70 - 1	75.2	<b>7</b> 5•2	14 • 1	4.9
17	59•3	64.7	69•7	73.7	73 • 7	14•4	5 • 4
19	59.2	64.9	70 • 1	74.1	74 • 1	14.9	5.7
21	64.2	68 • 7	73.2	77.0	77.0	12.8	4.5
23	64.5	69.0	73.3	77•2	77.2	12.7	4.5
25	64.3	68•5	72.7	76•7	76•7	12.4	4.2
27	64.2	69.0	75.2	77 - 4	77 • 4	13.2	4.8
29	64 < 3	69.2	74.9	77.8	77.8	13.5	4.9
31	65 • 1	69•6	75.5	<b>7</b> ੪ • 1	78 - 1	13.0	4.5
33	64.7	69 • 8	74 • 1	77.3	77 • 3	12.6	4.5
35	65 • 5	70 • 8	74.0	78.7	<b>79 •</b> 8	13.2	5 • 3
37	65•9	71 - 1	74.9	79.2	79.2	13 • 3	5 • 2
$OH \longrightarrow 39$	67.0	71.7	76 • 4	80.0	80.0	13.0	4 • 7
41	67.5	72 • 4	77.9	80.2	80•2	12.7	4.9
43	69 • 1	73 • 7	78•7	81.0	81 • 0	11.9	4.6
45	70.3	74 • 4	<b>7</b> 8•8	81.8	81 - 8	11.5	4 • 1
47	69.1	73 • 6	<b>7</b> 8 • 3	81 • 1	81 • 1	12.0	4 • 5
40	64 • 8	69•3	75•0	77 • 3	77 • 3	12.5	4.5
51	65+2	69 • 1	75•7	77.2	77.2	12.0	3•9
53	63.1	67 • 3	73.5	75∙3	75 • 8	12.7	4.2
55	60.9	65 • 4	73.0	74.4	74 • 4	13.5	4.5
57	59.1	64•3	<b>7</b> 2•3	73.5	<b>7</b> 3•5	14•4	5•2
59	60.5	65.0	72 • 4	74 • 1	74 • 1	13-6	4.5
61	59 • 8	64.4	71.4	73.5	<b>73 •</b> 5	13 • 7	4.6
63	58•7	64 • 0	73.3	73.1	74 • 5	14 • 4	5 • 3
<b>6</b> 5	57 • 8	62.9	70.6	72.7	<b>7</b> 2•7	14.9	5 • 1
67	55 ∙ ଖ	61 ~ 9	67.2	72.2	72.2	16.4	C = 1

### NOISE LEVEL TIME HISTORY DATA

### HUGHES 300 C

OCTOBER 14 1976

#### EVENT 29, 69 MPH FLY BY, CENTERLINE MIC. ( SOFT SITE )

INT	DBA	DBD	OASPL	PNL	PNLT	PNL-DBA	DBD-DBA
1	56 • 4	63 • 2	69•9	72•7	<b>7</b> 2•7	16.3	6.8
3	57.0	63.7	69+9	72.9	74 • 1	15.9	6.7
5	58 • 1	64.2	70 • 1	73.6	73 • 6	15.5	6 • 1
7	59•9	65 • 2	71 • 6	74.2	74 • 2	14-3	5•3
9	60 • 2	65 • 4	70 • 3	74 • 4	74 • 4	14.2	5.2
11	61.7	66 • 7	69•7	75 • 3	75 • 3	13.6	5.0
13	63.2	68 • 1	70 • 4	76.5	76.5	13.3	4.9
15	63 • 4	68 • 6	70 • 3	76.8	76.8	13.4	5.2
17	64 • 1	69•0	71 • 7	77•7	78 • 8	13.6	4.9
19	64.6	69.9	73.0	78 - 1	78 • 1	13.5	5+3
21	65 + 7	70 • B	74.0	76.5	78 • 5	12.8	5 • 1
OH-→23	67.2	72.2	75.1	80-1	80 • 1	12.9	5.0
25	66∙8	71.8	74.2	79•7	79.7	12.9	5.0
27	68 • 1	72.9	74.3	80.5	80 • 5	12.4	4.8
29	68 • 8	73 • 6	75.1	81+0	81 • 0	12.2	4•8
31	69.0	73 • 4	76.0	80•7	80.7	11.7	4 • 4
33	64.9	69.5	72.1	77.8	77.8	12.9	4 • 6
35	64.6	69•0	71.0	77.2	77.2	12.6	4.4
37	63 • 7	68.3	69.9	76 - 7	76 • 7	13.0	4 • 6
39	62.5	67.5	71.3	76.0	76.0	13.5	5.0
41	61.5	66.7	70.7	75.2	75 • 2	13.7	5.2
43	64 • 4	68.8	71+3	76•9	76.9	12.5	4 • 4
45	65-3	69.4	71.0	77.3	77.3	12.0	4 • 1
47	61.2	65.7	67.7	74-5	74.5	13.3	4.5
49	58 • 9	63.4	65.8	72.9	74.2	14.0	4.5
51	59 • 1	63.4	67.7	73-1	73 • 1	14.0	4.3

### NOISE LEVEL TIME HISTORY DATA

### HUGHES 300 C

OCTOBER 14 1976

EVENT 30. 69 MPH FLY BY, CENTERLINE MIC. ( SOFT SITE )

INT	DBA	DEG	OASPL	PNL	PNLT	PNL-DBA	DBD-DBA
1	54.5		66•7	71 • 7	73.0	17.2	5•7
3	54.8	60.7	68 • 4	71.8	72.8	17.0	5•9
			69+5	72.3	72.3	16.0	5•6
7	57.0	62.3	67.3	72.6	72.6	15.6	5 • 3
9	59.8	64 • 4	67.4	73.3	73 • 3	i3•5	4-6
11	57 • 4	62.6	67.4	72.6	72.6	15.6 13.5 15.2 14.9 13.8	5.2
13	58 • 4	63 • 6	68 • 2	73.3	73.3	14.9	5 • 2
15	61 • 4	66.2	70 - 1	75•2	<b>75.</b> 2	14.9 13.5 14.0 14.1	4.8
17	60 • 9	65•6	69•6	74-9	74.9	14-0	4.7
19	61.0	65•9	69•6	75•1	75 • 1	14-1	4.9
21							
23	62 • 3	67.2	70 • 1	75•7	75•7	13.4 13.8 14.7 13.8	4.9
25	61.7	67.9	70.8	<b>75•</b> 5	75.5	13.8	5•3
	60.9	66 • 7	70 • 4	75 • 6	75•6	14.7	5 • 8
	62.6	67•€	70.7 71.3 71.6 72.8	76•4	76 • 4	13.8	5.0
	63•5	68•1	71 + 3	76•9	76+9	13.4	4.6
33	64.5	69.5	71.6 72.8 73.6 73.6	77.9	77.9	13.4	3.0
35	64.5 64.8 66.2 66.5 66.2 65.9	69 • 8	72.8	78•2	78•2	13.4	5 • 0
$0 \text{ W} \xrightarrow{37} 38$	66.2	70.8	73.6	79•1	79.1	12.9	
ON 39 38	66 • 5	71.4	73.6	79.3	<b>79•</b> 3	12.8	
41	66 • 2	70•8	73•2	76.8	78 - 8	12.6	4.6
43	65.9	70 - 8	73.0		<b>78•</b> 8	12.9	4.9
45	65 • 2	70 • 1			78 • 1	12.9 12.8 12.7 12.6	4.9
47	64.7	69.6	73.2	77.5	77.5	12.8	4.9
49	63 • 5	68•4	72.3	76.2	76.2	12.7	4.9
51	62.9	67 • 5	71.7	75.5	75 • 5	12.6	4.6
53	60.7	65 • 6	69•7	74.3	74.3	12.7 12.6 13.6 14.2 14.5 13.8	4.9
55	59•3	64 • 1	67.9	73.5	73.5	14.2	4.8
57	58 • 4	63 • 1	66 • 4	72.9	72.9	14.5	4.7
59	59.2	63 • 4	66•3	73.0	74-5	13.8	4.2
61	57.5	62.3	00.0	1600	12.5	13.0	
63	58 • 2	62.7	66 • 1	72.6	74.0	14.4	4.5
65	57.2	61 -8	66•1 65•9 64•8	72.3	73.7	15·1 16·2	40
67	55.9	61 • 3	65•9	72 • 1	72 - 1	16.2 16.1	5 • 4
69	55.9	60 • 9	64.8	72.0	73 • 4		3•0
71	54 • 1	60 • 2	63.7	71 • 6	71 • 6	17.5	6 • 1

# NOISE LEVEL TIME HISTORY DATA HUGHES 300 C

OCTOBER 14 1976

EVENT 31. 76 MPH FLY BY. CENTERLINE MIC. ( SOFT SITE )

INT  1 3 5 7 9 11 13 15 17 19 21 23 25 27 29 31 33 35 37 39 41 43 45 47 49 51 53 55 57 59 61 63 65 67 69	DBA	DBD	OASPL	PNL	PNLT	PNL-DBA	DBD-DBA
1	56.5	62.4	68.8	72.6	72.6	16.1	
3	55•8	62.6	71 - 1	72.5	72.5	16.7	3 • ¥
5	55.0	62.7	73.5	72.2	72.2	17.0	0 + 5 7 =
7	57.9	64 • 4	72.6	73.4	73.4	15-5	107
9	57 • 6	64 3	72.5	73.4	73.4	15.8	6.7
11	56 • 8	63.3	70.7	73.0	73.0	16-9	6.5
13	55.4	62.4	68.9	72.3	72.3	16-0	7.0
15	58 • 4	64.9	70.9	74.1	74.1	15.7	/•U
17	<b>58 •</b> 5	64.9	71.8	74.1	74.1	15.6	6.0
19	58 • 4	64.6	70.9	73.5	73.5	15.1	5 4
21	59•7	65 • 6	71.2	74.8	74.8	16-1	o•≳
23	61.7	66.9	72.0	75.5	75.5	12.0	5.9
25	63.6	68.5	73.5	77.0	77.0	13.4	\$ • Z
27	65+0	69+9	74.1	78.5	78.5	13.5	4.9
29	65 • 1	70.4	75.2	78.7	78.7	12.6	4.9
$\frac{31}{32}$	66.2	71.1	75.6	79.3	79.3	13.0	3.3
33	66•7	71.2	75.2	79.5	70.5	10.0	4.9
35	66 - 1	71.1	75.0	79.2	79.2	12.0	4.5
37	66•3	71.0	74.9	79.3	79.3	13.1	5.0
39	67 • 2	72.0	74.5	80.0	80.0	10.0	4.7
41	66•7	71.8	74.3	79.1	79.1	12.0	4.8
43	65 * 9	70.7	75 • 1	78.7	78.7	16.4	5.1
45	66.2	70 - 7	74.6	78.6	78.6	10 0	4.8
47	66.2	70 • 4	73.2	78.2	78.0	10.0	4.5
49	65.3	69.6	72.0	77.6	77.6	10.3	4.2
51	63.0	67.6	72.7	76.0	76.0	12.0	4.3
53	61.8	66.4	72.9	75.1	75.1	13.0	4.6
55	59.6	64.9	72.1	73.7	73.7	13.3	4.6
5 <b>7</b>	59.5	64.5	71.3	73.5	73.5	14.0	5.3
59	57.8	63•6	71.7	73.0	73-0	14.0	5.0
61	59.9	64.9	72.6	73.9	73.0	13.5	5.8
63	59.5	64.4	71.2	73.5	7/1.5	140	5.0
65	58.3	63.7	70.5	73-0	73.0	14.0	4.9
67	57 • 1	62.8	70.4	72.7	79-7	1407	5 • 4
69	57.9	63.3	70 • 4	73.1	73.1	12.0	5•7
			• • - •		13.1	12.5	5 • 4

### NOISE LEVEL TIME HISTORY DATA

HUGHES 300 C

OCTOBER 14 1976

EVENT 33. 76 MPH FLY BY. CENTERLINE MIC. ( SOFT SITE )

101	DBA	DBD	OASPL	PNL	PNLT	PNL-DBA	DBD-DBA
1	57 • 7	63.7	70•3	73 • 3	73.3	15.6	6•0
3	58.6	64.4	73.9	73.5	73.5	14.9	5•8
5	58.9	64.8	72.3	73.8	73•8	14.9	5•9
7	59.4	65.2	72.1	74.1	74 • 1	14.7	5•8
9	61.3	67 • 4	74.0	75.9	77.1	14.6	6 - 1
11	63.2	68.2	74.8	77.1	78 • 5	13.9	5•0
13	62.5	67.5	76.5	76.0	77 - 1	13.5	5.0
<b>15</b>	62.3	67.2	73.3	76.4	76 • 4	14-1	4.9
17	62.4	67 • 4	73.5	76 • 4	76 • 4	14.0	5.0
19	60 • 4	66.2	75.1	74.9	74.9	14.5	5•8
21	61.0	66.9	73.9	75 • 5	75.5	14.5	5•9
23	64.8	69•6	74.5	78.0	78•0	13.2	4.8
25	67.8	72.1	76.3	80 • 4	80 • 4	12.6	4 • 3
27	69.2	73.4	77.8	81.8	81.8	12.6	4.2
29	68.9	73.4	77.2	81.3	81 • 3	12.4	4.5
31	68 • 1	73.0	76.2	81.0	81.0	12.9	4.9
OH>33	68.0	72.9	76.9	80.9	80 • 9	12.9	4.9
35	66.0	71.0	76.3	79.0	79.0	13.0	5•0
37	66 • 8	71.5	76.5	79.5	79•5	12.7	4.7
39	66.2	70.9	76•3	<b>7</b> 8•7	78.7	12.5	4 - 7
41	63.7	68 • 6	74.1	76.7	76.7	13.0	4.9
43	64.2	69 • 1	74.3	76 • 9	76.9	12.7	4.9
45	63 • 0	68 • 2	73.9	76.0	76.0	13.0	5 • 2
47	59.8	65 • 4	72.1	74.0	74.0	14.2	<b>5</b> • 6
49	60.9	66 • 1	72.9	74.5	74.5	13.6	5•2
51	58.9	64 • 4	71.5	73 • 6	73.6	14.7	<b>5 •</b> 5
53	57 • 1	62.9	69.6	73.0	73.0	15.9	5•8
55	57 - 1	63 • 1	71.1	72.9	72.9	15.8	6.0
57	58•9	64 • 1	70.3	73.3	74.4	14.4	5•2

### NOISE LEVEL TIME HISTORY DATA

#### HUGHES 300 C

#### OCTOBER 14 1976

### EVENT 34, 76 MPH FLY BY, CENTERLINE MIC. ( SOFT SITE )

INT	DBA	DBD	OASPL	PNL	PNLT	PNL-DBA	DBD-DBA
1	59•3	65 • 2	73.4	74.2	74.2	14.9	5•9
3	59•6	65•9	75.6	74.5	74.5	14.9	6.3
5	58 • 6	65.2		73.9	73.9	15.3	6.6
7	59.5	65 • 4	70 • 5	74.2	74.2	14.7	5•9
9	61.9	67 • 1	71.5	76.0	76.0	14.1	5•2
11	62.8	68 • 2	71.9	76.8	76.8	14.Q	5 • 4
13	64.0	69 • 1	73.5	77.7	77.7	13.7	
15	66 • 8	71 • 7	74.9	79.7	79.7	12.9	4.9
17	66 • 2	71.6	<b>75.</b> 0	79.0	79.0	12.8	5 • 4
19	68•7	73.8	77-1	81.2	81.2	12.5	5 • 1
OH 21 >	69•0	74.4	77.7	81.9	81.9	12.9	5 • 4
23	70 • 1	75•3	77 • B	82.9	82.9	12.8	5•2
25	69 - 1	73.9	76.7	81.7	81.7	12.6	4.8
27	68•0	72.8	75.3	80.6		12.6	4.8
29	66•5	71.4	74.1	<b>79.</b> 3	79.3	12.8	4.9
31	67.9	72•9	75.0	80 • 4	80.4	12.5	5.0
33	67.0	71.8	73.8	79.6	79.6	12.6	4.8
35	66.7	71 • 4	72.6	79 • 3	79.3	12.6	4.7
37	64 • 3	69 • 1	72.2	77.3	77.3	13.0	4 • B
39	63•3	<b>6</b> 8•0	71.4	76•6	76.6	13.3	4.7
41	64 • 6	68 • 6	70 • 1	77 • 4	77.4	12.8	4.0
43	62.0	66 • 2	70 • 1	74.8	74.8	12.8	4.2
45	58 • 9	64.3	69.8	73.3	73 • 3	14.4	5 • 4
47	60 • 1	65 • 5	70.0	73.9	73.9	13.8	5 • 4
49	60 • 7	66 • 0	70.7	74.8	74 • 8	14.1	5 • 3
51	59.5	64.8	70 • 1	73 • 7	73 • 7	14.2	5 • 3
53	59•3	64 • 4	69.3	73.6	73.6	14.3	5 • 1

### NOISE LEVEL TIME HISTORY DATA

#### HUGHES 300 C

OCTOBER 14 1976

#### EVENT 35. 82 MPH FLY BY. CENTERLINE MIC. ( SOFT SITE )

INT	DBA	DRD	UASPL	PNL	PNLT	PNL-DBA	DBD-DB4
1	54.8	62.1	69•1	72.5	72•5	17.7	7 • 3
3				72.4			
5		62.9		72.6			
7	56.0	62.6		72.6		16.6	6•6
9		65-8		74.9		13.4	4.3
11	62.0	66 • 9		75.8	75•8	13.8	4.9
13	58 • 5	64.6		73.6		15.1	6.1
15		63.3		72.8	72.8	15.6	6 • 1
17		65.9	69.5	75.2	75.2	14.4	5 • 1
19		67 • 1	70.7	75.8	75•8	13.8	5•1
21	61 • 4	67.0	71.0	75.9	75•9	14.5	5 • 6
23	64 • 4	69.6	72.1	78 • 1	78 • 1	13.7	5•2
25	64.1	69•4	72.7	77.8	77.8	13.7	5•3
27	65 • 1	70 • 1	72.7	78•5		13.4	5•0
29	66 • 1	71•3 70•7	73.6	79.3		13.2	5•2
$CH = \frac{31}{33} 32$	65 • 5	70.7	73.9	78.5	78 • 5	13.0	5•2
<b>3</b> 3	66-1	71.0	74.9	78.6	78•6	12.5	4.9
35	66 • 9	71.4	75.7	78.9	78.9	12.0	4.5
37	66 • 4	71.2	74.4	78•6	78•6	15.5	4•8
39	66•5	70.7	75.0	78.5	78•5	12.0	4.2
41	65•5	69•7		<b>77</b> •5		12.0	
43		68 • 5		76.3	76•3	12-4	
45	64.6	69•3	72.3	77+3	77.3	12.7	
47	60 • 1	66 • 1	70.3	74.9	74.9	14.8	
49		63.7	66.7			14.7	5•1
51			66.2	73•2	74.5		
53	56•9	62.6	65•6	72.7	72.7	15.8	
55	59 • 4	64.3	67 • 1	73•5	75 • 1	14.1	
57		64 • 1	67.2			15-1	
59	56 • 3	63.3	67.0	72.6	72.6	16.3	7•0

### NOISE LEVEL TIME HISTORY DATA

HUGHES 300 C

OCTUBER 14 1976

EVENT 36. 82 MPH FLY BY, CENTERLINE MIC. ( SOFT SITE )

INI	DBA	aea	OASPL	PNL	PNLT	PNL-DB4	DBD-DB4
1	53.7	61 • 8	67•9	72.1	72 • 1	18.4	8 • 1
3	53.5	61.6	67.3	72.1	72 • 1	18.6	8 • 1
5	55.2	62 • 6	68 • 4	72.4	72 • 4	17.2	7.4
7	56.9	63.4	69.3	72.9	72.9	16.0	6 + 5
9	55.9	63.2	68∙8	72.7	72.7	16.8	7.3
11	58.7	64.5	69.6	73.5	73 • 5	14.8	5•8
13	57.5	63 • 8	69.3	73.0	73.0	15.5	6.3
15	55.7	62.6	68•6	72.5	72.5	16.8	6.9
17	55.4	62.2	67.8	72.3	72.3	16.9	6.8
19	56.5	63.0	69.3	72.7	72.7	16.2	6.5
21	58.9	64.3	69.8	73.7	73.7	14.8	5.4
23	59.5	65.0	69.6	73.9	73.9	14.4	5.5
25	59•8	65.1	68.5	73.7	73.7	13.9	5.3
27	61.2	66•2	69 • 4	74.9	74.9	13.7	5.0
29	62 • 4	67.8	70.8	76.4	78.0	14.0	5 • 4
31	66.0	70•9	73.7	78.9	80.2	12.9	4.9
33	65.7	70.5	73.9	78 • 8	78 • 8	13.1	4.8
OH → 35	65∙2	70.3	74.0	78.5	78.5	13.3	5.1
37	65.4	70 • 4	74.4	78.5	78.5	13.1	5.0
39	66.2	71.0	74.2	79.0	79.0	12.8	4.8
41	66 • 4	71.5	73.7	79.4	79.4	13.0	5.1
43	66•1	70.7	73.1	78.7	78.7	12.6	4.6
45	64 • 5	69.2	70.7	77 - 1	77.1	12.6	4.7
47	64.0	68•6	69.9	76.8	76.8	12.8	4.6
49	64.5	68.6	69+2	77.0	77.0	12.5	4.1
51	64.4	68.5	68•2	76.9	76.9	12.5	4 • 1
53	61.6	66.2	67.7	75 • 1	75 • 1	13.5	4.6
55	60.2	64.8	66.2	73.9	73.9	13.7	4.6
57	58∙8	63.5	66•0	73.0	73.0	14.2	4.7
59	57.6	63.0	65•9	72.7	72.7	15.1	5.4
61	57 • 4	62•8	65.9	72.6	72.6	15.2	5.4

### NOISE LEVEL TIME HISTORY DATA

#### HUGHES 300 C

OCTOBER 14 1976

### EVENT 37, 82 MPH FLY BY, CENTERLINE MIC. ( SOFT SITE )

101	DBA	DBD	OASPL	PNL	PNLT	PNL-DBA	DBD-DBA
1	47 • 4	55•7	65•2	67•3	67.3	19.9	8•3
3	53.2	60 • 7	70 • 4	71.6	71.6	18 • 4	7.5
5	53.7	60.5	69 • 6	71.6	71.6	17.9	6.8
7	55.0	61.2	67.9	71.9	71.9	16.9	6.2
9	60.7	64.6	71.3	74.0	75.5	13.3	
11	59 • 1	63 • 3	68 • 8	72.7		13.6	
13	53.0		68 • 2	71 - 6		18.6	7.8
15	56.6	62.6	68 • 4	72.5		15.9	6.0
17	57.0	62.7	68•9	72.8	72.8	15.8	5.7
19	58.5	63 • 5	68.2	73 • 6		15.1	5.0
21	56.9	62.8	67 • 5	72.8	72.8	15.9	5•9
23	57.8	63 • 6	68•6	73 • 1	74.4	15.3	5.8
25	59•6	65•3	70.9	74.3	74.3	14-7	5 <b>• 7</b>
27	58•6	64.6	69 • 8	73.9		15.3	6.0
29	58•4	64.9	69.0	74-1	74 • 1	15=7	6 • 5
31	59.7		71.8	75 • 2		15.5	6 • 3
33	60.6	66 • 4	73.2	<b>7</b> 5•8		15.2	5.8
35	62•5	67 • 4	71.2	76•4	76 • 4	13.9	
37	63.7		73.0	77•5		13.8	
. 39	65.8		74.4			13.0	
oH>41	66.5	71.5	75 • 5	79•3		12.8	
43	65 • 4		74.9			13.2	
45	66•1	<b>7</b> 0 • 8	75•6	78•7		12.6	4.7
47	65.2	69.4	74 • 4	77 • 5		12.3	4.2
49	64.5	69.2	76.0	77.2		12,7	4.7
51	63.6	68 • 1	75 • 1	76.0		12.4	4 • 5
53	63.6	67.7	72.8	76.0		12.4	4 • 1
55	61.0	<b>65•</b> 8	70.2	74.4		13.4	4.8
57	59.0	63.9	68 • 9	73.2		14.2	4.9
59	59.1	64.0	70 • 3	73.3		14.2	4.9
61	60.8	64.9	71 • 2			13.3	4 • 1
63	59.2	63.7	71 - 1			14.1	4.5
65	56.5	62 • 1	69 • 8			15.9	
67	55 · 1		68 • 8			17.0	
69	53.5		68 • 7			18 • 3	
71	53.1	60 • 8	68 • 1	71.8	71.8	18.7	7 • 7

### NOISE LEVEL TIME HISTORY DATA

### HUGHES 300 C

OCTOBER 14 1976

### EVENT 40, 90 MPH FLY BY, CENTERLINE MIC. ( SOFT SITE )

INT	DBA	DBD	OASPL	PNL	PNLT	PNL-DBA	DBD-DBA
1	55.7	62.7	70 • 4	72.8	72.8	17•1 17•9 16•1 13•8	7•0
3	54.7	62 - 4	68•9	72.6	72 • 6	17.9	7 • 7
5	56∙3	61.8	67 • 4	72.4	72.4	16-1	5 • 5
7	59.6	64.0	70.3	73.4	73 • 4	13.8	4 • 4
Q.	5872	64.0	72.9	73.2	73.2	15.0	5.8
11	55.3	63 • 2	74.1	72.6	72•6	17.3	7.9
13	56.1	63 • 1	73 - 4	72•7	72.7	17.3 16.6 15.1 14.2	7.0
15	58.2	63.9	72.6	73.3	73 • 5	15.1	5 • 7
17	60 • 5	65•8	72.7	74.7	74.7	14.2	5•3
19	59•7	64.9	71 • 7	74.4	74 • 4	14.2 14.7 15.6 13.7 14.0 15.0	5 • 2
21	57 - 5	63 • 8	71 - 1	73 • 1	73 • 1	15.6	6 • 3
23	61.7	66.5	72 • 4	75 • 4	76 • 4	13.7	4.8
25	61.9	67.2	73.6	75•9	75.9	14.0	5•3
27	60•9	67.5	<b>75</b> • 3	75•9	75.9	15.0	6+6
29	60∙8	68•5	75•7	76 • 5	76 • 5	15.7	7 • 7
31	60 • 4	67.2	73 • 4	75.8	75•8	15.4	6•8
33	60.9	67 • 6	73-7	76+0	76 - 0	15+1	6•7
35	60 • 8	67.7	74.4	75•9	<b>7</b> 5•9	15 • 1	6•9
37	60•6	67.5	74.2	76 • 1	76 • 1	15.5	6 • 9
39	62.7	68•7	72.9	4	77•4	14.7	6.0
41	65•6	70.5	73.5	78•7	78•7	13.1	4.9
OH 43 44	67.2	72 • 1	75.8	79.9	79.9	12.7	4 • 9
45	67 • 1	72 • 1	<b>76.</b> 6	79•9	79.9	12.8	5•0
47	68•3	73.2	76•7	80.7	80 <b>•7</b>	12.4	4.9
49	66.5	71 • 4	75.2	79 • 1	79 • 1	12.6	4.9
51	66.2	70•9	74.3	78•7	78•7	12.5	4.7
53	64.8	69•7	73.1	77 • 6	77.6	12.8	4.9
55	64.6	69.2	72.4	77•3	77.3	12.7	4 • 6
57	65.7	69.7	72.2	77•9	77.9	12.2	4.0
59	61.2	66.0	70.7	74.6	<b>7</b> 4•6	13.4	4.8
61	61+9	66 • 4	72.9	75•0	76 • 4	13.1	4.5
63	61.2	65 • 6	72.5	74.5	<b>75 •</b> 6	13.3	4 • 4
65	59.5	64 - 1	69.8	73 • 4	73 • 4	13.9	4 • 6
29 31 33 35 37 39 41 43 45 47 49 51 55 57 59 61 63 65 67 69 71	58.9	63 • 7	72.9	73 • 1	74.6	14.2	4.8
69	56.5	62 • 8	74.2	72.4	72 • 4	15.9	6 • 3
71	56.2	63.0	72.7	72.4	72.4	16.2	6•8
73	57 • 1	63.0	71.5	72.5	72.5	15.4	5•9
75	52.8	60 • 6	69•6	71.5	71.5	18 • 7	7 • 8

### NOISE LEVEL TIME HISTORY DATA

### HUGHES 300 C

OCTOBER 14 1976

### EVENT 44. 6 DEGREE APPROACH. CENTERLINE MIC. ( SOFT SITE )

INT	DBA	DBD	OASPL	PNL	PNLT	PNL-DBA	DBD-DBA
1	55•5	62.7	72.7	72.4	72.4	16.9	7.2
3	56 • i	63.2	73.9	72.6	73.9	16.5	7 • 1
5	56.7	63.3	72.0	72.8	74.3	16-1	6 • 6
7	61 • 1	65 • 1	73.4	73.9	75.3	12.8	4.0
9	60 • 6	65•6	75.5	74.6	75.6	14.0	5.0
11	58•3	64.6	75•3	73.4	74.6	15.1	6.3
13	58 • 2	64.8	72.9	74.0	74.0	15.8	6•6
15	58 • 6	65 • 1	71-4	74.2	74.2	15.6	6•5
17	61.8	66 • 6	72.6	75 • 8	75 • 8	14.0	4 • 8
19	63 • 4	68 • 4	73.8	77.0	77.0	13.6	5 • 0
21	62.7	68.7	75 • 6	77.3	77.3	14.6	6.0
23	67 • 7	72 • 4	76.2	80 + 3	81.3	12.6	4.7
25	69.0	73.5	75.7	81.5	81.5	12.5	4.5
27	67 • 6	72.1	74•7	80 • 4	80 • 4	12.8	4.5
29	66 • 4	71.9	74.4	79.5	80.6	13-1	5•5
OH —>31	67 • 4	72.5	75.8	80 - 1	80 • 1	12.7	5 • 1
33	70 • 6	75.5	78.9	82.5	82.5	11.9	4.9
35	70.8	75 • 5	78.3	82.7	82.7	11.9	4.7
37	66.9	71 - 7	76.2	78.9	78.9	12.0	4.8
39	66 • 0	71.0	75•3	78.5	78.5	12.5	5.0
41	66 • 1	70+9	74.6	78.7	78.7	12.6	4.8
43	62.4	67.3	72.9	75.9	75.9	13.5	4.9
45	62.5	67 • 6	74.5	76 • 1	76.1	13.6	5 • 1
47	61.5	67.0	74.4	75.3	75.3	13.8	5 • 5
49	57.3	63.9	73 • 1	73 - 1	73 - 1	15.8	6-6
51	56.9	63 • 8	73.9	72.9	72.9	16.0	6.9
53	56.2	63 • 3	73.7	72.6	72.6	16.4	7 - 1

### NOISE LEVEL TIME HISTORY DATA

HUGHES 300 C

### OCTOBER 14 1976

### EVENT 58, 9 DEGREE APPROACH, CENTERLINE MIC. ( SOFT SITE )

INT	DBA	DBD	OASPL	PNL	PNLT	PNL-DBA	DBD-DB4
•							
1	64.6	69•3	74.5	77 • 1	78 • 3	12.5	4•7
2	63.7	69.0	74.9	77 • 1	77 • 1	13.4	5•3
3	64.2	69.5	74.9	77•5	77 • 5	13.3	5 • 3
4	66 • 8	71.2	75•1	78•7	78•7	11.9	4 • 4
5	68•6	72.6	75.9	80 • 3	81 • 4	11.7	4.0
6	72 • 4	75 • 1	77.8	83.2	84.3	10.8	2.7
7	73.6	76.9	78.9	84•5	84.5	10.9	3•3
8	73 • 6	77.3	78•9	84 • 5	84 • 5	10.9	3 • 7
9	72.3	77.0	78.3	83 • 6	83 • 6	11.3	4.7
10	73.2	77.6	78.6	84.9	84.9	11.7	4 • 4
11	73.9	78.4	79•3	85 • 6	85 • 6	11.7	4 • 5
12	75•8	79.9	ძ0∙6	ଚିଚ୍∙ଟି	86∙8	11.0	4 - 1
oH <del>&gt;</del> 13	76.0	80.3	81.2	87.3	88 • 3	11.3	4.3
14	76.2	80 • <b>7</b>	81.7	87.6	87.6	11-4	4.5
15	74.4	79.4	80 • 8	86 • 3	86 • 3	11.9	5.0
16	72.8	77.7	79.4	84 • 6	84.6	11.8	4.9
17	70 • 5	75 • 4	78.0	82 • 4	82.4	11.9	4.9
18	69•8	74.7	78.2	81 • 4	81 • 4	11.6	4.9
19	68 • 7	73.9	78 • 4	80 • 6	80 • 6	11.9	5 • 2
20	67 • 7	73.0	77.9	80.0	80.0	12.3	5 • 3
21	66+9	71.9	77.4	79•6	79.6	12.7	5.0
22	66•3	71.3	76.7	78 • 9	78.9	12.6	5.0
23	66 • 3	71.0	76.5	.78 • 8	78 • 8	12.5	4.7
24	66.2	70.5	76.6	78 • 1	78 • 1	11.9	4.3
25	66•5	70.7	76.9	78 • 5	79.6	12.0	4.2
26	66.5	70.6	76.6	78.3	79.6	11.8	4 • 1
27	65 • 3	69.7	75 • 3	77.5	77.5	12.2	4.4
28	64.5	68 • 8	74.4	77 • 0	77.0	12.5	4.3
29	65.0	69+0	73 •8	77.6	77.6	12.6	4.0
							=

### NOISE LEVEL FREQUENCY SPECTRA TIME HISTORY

#### HUGHES 300 C

OCTOBER 14 1976

EVENT 31. 76 MPH FLY BY. MIC. 150 METERS WEST

1/3 OCTAVE FREQUENCY BAND VS TIME (SECONDS)
(DB RE 20 MICRO PA)

BAND	-33•0	-26.0	-19.0	-12-0	-7.5	-5.0	0	2•0	9•0	16.0	16.5
17	54.7	56.9	59.1	57.9	62.5	61.3	61 - 4	60 • 4	57.2	59.3	58+7
18	51.2	55 • 4	56.2	54.0	57.7	60 • 4	60.8	58 • 5	57.6	58.3	59.0
19	52.2	53.5	53.7	53.0	56 • 7	55.9	56.5	55.2	54.8	59 • 1	59 • 4
20	58.2	63 • 5	64.9	63.6	63 • 5	62.8	57.0	58 • 2	61 • 4	59.0	59 • 1
21	47.4	51.8	52.2	53 • 1	54.7	52.5	51.8	50 • 3	48.5	51.2	51.2
<b>2</b> 2	42.7	46.9	46.0	45 • 5	47.8	46.3	53 • 4	52.2	49 • 1	50.0	50 × 1
23	53∙2	62.9	59.0	53.2	56.0	61.8	64.2	60.2	55 • 1	49.0	48.7
24	42.2	49.8	48 • 1	46.0	51 • 4	55.0	55 • 7	55 • 6	57.5	49.4	48.7
25	46.9	57 • 3	53 • 8	56•5	65、2	66.7	52 • 4	52 • 2	57 • 1	50.2	49.3
26	43.7	52.9	48 • 4	56 • 1	64.5	59.5	58 • 2	58 • 6	50 • 4	52.5	51.3
27	42.2	53 • 2	49.7	54.0	57.1	57.9	57.8	58 • 1	58•9	53 - 4	52.3
28	40 • 4	5û • 4	46.9	46 • 6	53•3	59.0	60.2	61.5	56 + 6	48 = 2	47.1
29	42.2	49.2	45.0	47 • 1	57•5	56 • 3	59.2	59.7	57.8	53.3	51.4
30	40.7	46 • 7	45 • 0	49.4	52.4	56 • 1	58 • 8	57•7	55 • 5	50.9	49.9
31	40 • 4	45 • 1	45.0	46 • 8	51 • 4	54 • O	56 • 6	56•5	54 • 3	51.2	49.3
32	40 • 4	45.0	45.0	45•3	46.8	50 • 4	54.4	55.0	50 • 8	46 • 4	45.7
33	40 • 4	45.0	45.0	45.0	45.8	49.6	52.9	53 • 1	49 • 4	45.3	45.2
34	40 • 4	45.0	45.0	45.0	45.0	45.4	48 • 6	50 • 5	46 • 1	45.0	45.0
35	40 • 4	45.0	45.0	45•0	45.0	45.0	45 • 5	46.2	45.2	45.0	45.0
36	40 • 4	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0
37	40 • 4	45.0	45.0	45.0	45.0	45.0	45 • 0	45 • 0	45.0	45.0	45.0
38	40 • 4	45 • 0	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0
39	40 • 4	45.0	45•0	45.0	45.0	45.0	45 • 0	45 • 0	45.0	45.0	45.0
40	43 • 4	48 • 4	48 • 1	47.6	47.5	48.0	47.8	48 • 0	47.9	47.9	48.2
Α	50 • 4	58 • 7	55•6	58•4	65•4	66 • 5	66•7	66 • 5	63 • 7	59•1	57.7
D	58•9	65•3	63 • 5	64•3	69 • 8	70.2	70 • 3	70 • 1	68•0	64.2	63.8
OASPL	66.2	70.6	71 - 1	68•5	73.5	73.4	74.2	73 • 2	70.8	71.2	71.4
PNL	68 • 1	74 • 3	72.7	73.3	77.7	78 • 6	77 • 5	77.7	75.8	73 • 1	72.8
PNLT	68 • 1	74.3	72.7	73.3	79.3	78.6	77 • 5	77.7	75•8	74.4	72.8

### NOISE LEVEL FREQUENCY SPECTRA TIME HISTORY

#### HUGHES 300 C

OCTOBER 14 1976

EVENT 33, 76 MPH FLY BY, MIC. 150 METERS WEST

1/3 OCTAVE FREQUENCY BAND VS TIME (SECONDS)
(DB RE 20 MICRO PA)

BAND	-89.0	-22.5	-16.0	-9.5	-3 • 0	0	3 • 5	10.0	16.5	18.5
17	60.2	60 • 3	58•9	65.2	63•6	74.9	68.7	67•5	63•2	59.6
18	57.9	61 - 1	60 - 6	63 - 6	62-4	76.1	69.1	65 • 4	60.7	58 • 5
19	56.9	60.6	58 • 6	60 • 4	61.5	70.0	66.2	60.5	58 • 8	56 • 9
20	57.2	62.0	63.7	64.6	64.2	68.2	65.9	60.6	57.2	56.0
21	51.9	54.4	56.3	58 • 3	59.2	63.2	65 - 1	58 • 5	53.7	53 • 4
22	53.9	53.5	53 • 4	56 • 1	<b>57</b> • 3	61.6	63.4	55.9	54.8	50 • 6
23	53.9	56.9	58 • 4	55.2	62.0	64.5	61.8	55 • 1	52 • 4	49.6
24	47.9	50.2	51.8	52.5	57.4	62.1	60.2	53.0	49.2	48.2
25	43.9	51.9	48.6	55 • 1	62.3	59 • 4	57.6	51.8	46.7	45.8
26	43.2	47 • 8	51.3	55 • 1	51.9	60.3	59.2	52.7	45.5	45.0
27	41.4	46 • 0	53.5	52.3	57.6	58 • 4	59.3	51 - 1	47.6	45 • 4
28	40 • 4	45•4	51.5	46.6	54.8	58.9	59.2	46.6	48.2	46.5
29	40.4	45.8	48.7	46 • 3	52 • 1	56.9	57.6	48.0	48.9	47.4
30	40 • 4	45.6	46 • 4	46.2	50 • 1	56.9	57.8	45.2	47.2	45.5
31	40 • 4	45.0	45.7	45.2	48.8	54.9	56.9	45.3	45 • 1	45.0
32	40 • 4	45.0	45.0	45.0	46.3	53 • 3	53.9	45.0	45.0	45.0
33	40.4	45.0	45.0	45•0	45 • 3	51.7	52.7	45.0	45.0	45.0
34	40.4	45.0	45.0	45.0	45.0	49.5	49 • 4	45.0	45.0	45 • 0
35	40 • 4	45 • C	45.0	45.0	45.0	46.2	45.6	45.0	45.0	45.0
36	40 • 4	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0
37	40 . 4	45.0	45.0	45 • 0	45.0	45.0	45.0	45.0	45.0	45.0
38	40 • 4	45.0	45.0	45.0	45 • 0	45.0	45.0	45.0	45.0	45.0
39	40 • 4	45.0	45.0	45.0	45.0	45 • 1	45.0	45.0	45.0	45.0
40	42.9	47 • 8	47.5	47.3	47.6	48 - 4	47.7	47.4	47.3	47.7
Α	50 • 4	54.9	57.8	57 • 6	62.3	66.5	66.4	56.8	55 • 4	53.6
$\mathbf{p}$	59.7	63.8	64.6	65•5	68 • 3	73.9	71.7	65•4	63.7	62 - 1
OASPL	71.9	71 - 1	70.9	74.9	76.0	85 • 3	80.5	76.8	74.9	71 • 4
PNL	68.2	72.7	73.3	73.6	76.4	79.9	78 • 9	73.4	72.3	71 -8
PNLT	68.2	72.7	73.3	73 • 6	76 • 4	79.9	78.9	73+4	72.3	71.8

### NOISE LEVEL FREQUENCY SPECTRA TIME HISTORY

HUGHES 300 C

OCTOBER 14 1976

EVENT 34, 76 MPH FLY BY, MIC. 150 METERS WEST

1/3 OCTAVE FREQUENCY BAND VS TIME (SECONDS)
(DB RE 20 MICRO PA)

BAND	-25.5	-19.5	-13.5	-7.5	-1.5	0	4.5	10.5	16.5	19.0
17	51 • 9	60 • 6	62.7	61.6	57.8	56.8	54.8	54.2	50 • 4	50.5
18	50 • 4	57.7	59.9	59.2	59.2	56 • 1	55.4	53.9	53.0	52.9
19	44.7	55.0	59.6	57.4	55.2	54 • 1	55 • 8	56 • 8	57 • 1	56.7
50	55 • 4	65.0	64.8	63.0	62.2	62 • 1	62.8	62.9	63 • 4	61.3
21	45.4	52.2	55.0	53 • 4	49.2	48.6	48.3	50.2	50 • 4	49.8
22	43 • 4	48.2	50.0	48.2	50.0	52.2	53 • 4	48.4	48.0	48.8
23	55 • 2	57.5	55 • 1	57.5	60.2	62.2	61.2	50 • 3	46.7	47.7
24	44.4	47 • 1	46.8	51.7	56•7	57.9	56.7	53.3	49.5	48.2
25	50 • 4	51 - 2	50.7	62.0	54.5	54.2	53.5	53.6	50 • 9	49.4
26	48.7	46.7	56.0	59.1	52.9	56.2	55.2	49.3	53 • 8	53.0
27	45 • 2	47.7	54 • 1	52.3	60 • 5	60 • 7	58.3	51 • 6	49.9	52.5
28	41.2	45 • 3	49.6	55.9	54.9	59 • 3	54•6	52.9	48 • 3	48 • 7
29	40 • 4	45.0	47.2	53•6	56 • 1	58•7	54.5	51.6	50.7	50.0
30	40 • 4	45 -0	47.4	55+1	57 - 6	59.2	56 € 6	51 - 1	49.6	50 • 1
31	40 - 4	45 • 0	45.8	52.0	56 • 4	59.0	56.3	51 • 1	48.7	46.3
32	40 - 4	45 • 0	45.0	49.0	54•3	56 • 2	53 • 2	49.1	46.8	45.0
33	40 • 4	45 • 0	45.0	47.7	52 • 4	56 • 2	52.6	47.0	45.4	45.0
34	40 • 4	45 • 0	45.0	45.0	48 • 3	51.5	50.5	45 • 0	45.0	45.0
35	40 • 4	45 • 0	45.0	45.0	45 • 6	48 • 5	47 - 1	45∙0	45.0	45.0
36	40 • 4	45 • 0	45.0	45.0	45.0	45.2	45 • 0	45.0	45.0	45.0
37	40.4	45 • 0	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0
38	40 • 4	45 • 0	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0
39	40 • 4	45.0	45.0	45.0	45.0	45.0	45.0	45 • 1	45.0	45.0
40	41.7	47 • 4	47 • 6	47.5	47.2	47 • 4	47.6	47.6	47.3	47.6
Α	51 • 4	54 0 5	58 • 3	62.9	64.8	67 • 4	64 • 4	59•5	58•0	57.4
D	59•2	63 • 2	65 • 1	67.5	69 • 1	71 • 5	69.0	64.8	64.0	62.9
OASPL		70 • 3	73 • 1	72.5	72.5	72.6	70 • 7	68 • 3	67 • 1	65.9
PNL	68•4	72.4	73 • 3	76.0	76.9	79-1	77.0	73.5	72.9	72.7
PNLT	68 • 4	72 • 4	73.3	76.0	76.9	79 • 1	<b>77 •</b> 0	73 • 5	72.9	72.7

### NOISE LEVEL FREQUENCY SPECTRA TIME HISTORY

HUGHES 300 C

OCTOBER 14 1976

EVENT 31. 76 MPH FLY BY. MIC. 150 METERS EAST

1/3 OCTAVE FREQUENCY BAND VS TIME (SECONDS)
(DB RE 20 MICRO PA)

BAND	-31.5	-24.5	-17.5	-10.5	-3 • 5	0	3 • 5	10.5	17.5	18.0
17	•0	59-1	63.9	62 • 4	67 • 8	66 • 1	67.3	68•7	67.6	67 • 4
18	•0	55•3	59.6	56 • 1	61.3	62 • 1	62.5	65.7	61.0	60 - 4
19	•0	54.7	57.1	54.7	57.6	57 • 1	59.3	61.1	60.0	59+3
20	•0	62.5	63.6	64.6	62 • 1	55.8	56.9	61.3	60.7	59.9
21	•0	51.6	53.6	53.9	53.4	52.9	53.3	54.6	51.8	51.9
22	•0	47 • 7	48.5	46.4	52.2	54.5	54.5	54.0	49.9	50 • 4
23	•0	58•3	57 • 4	48.4	56 • 6	58 • 5	60.7	56.5	49.6	49.7
24	•0	47 • 5	46.9	48.3	57.9	56.5	55.3	58.2	49.3	48.7
25	•0	46 • 1	45.7	61.2	56.0	51.8	52.3	55.6	49.7	49.2
26	•G	45.0	48.7	61.1	55 • 3	62 • 1	59.1	52.1	54.0	53.3
27	•0	45.0	49.2	55•5	58 • 5	56.6	55.7	53.7	53.6	52.9
28	•0	45.3	49.9	50 • 4	55•9	60.3	58 • 8	55.2	48 • 1	47.6
29	•0	47 • 4	47.7	57 • 1	58 • 8	60.2	58.3	56.1	50 • 4	50.6
30	•0	47.3	46.7	52.4	58•0	59 • 1	57.8	55•7	49 - 8	49.9
31	•0	45.5	46.2	55 • 1	55.0	56•3	56.3	56-4	47.8	48 • 0
32	•0	45 • 0	45.0	50.9	54 • 3	54.5	54.5	54.4	45.7	45.0
33	•0	45 • 0	45.0	47.2	51.2	52.1	52.3	53.3	45.0	45.0
34	•0	45.0	45.0	45.2	48 • 4	49.9	50.0	50.2	45.0	45.0
35	•0	45.0	45.0	45.0	45.0	45.7	45.6	45.3	45.0	45.0
36	•0	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0
37	•0	45.0	45.0	45.0	45.0	45.0	45.0	45 + G	45.0	45.0
38	•0	45.0	45.0	45.0	45 • 0	45.0	45.0	45.0	45.G	45.0
39	•0	45.0	45 · U	45 • 0	45.0	45•0	45.0	45.0	45.0	45.0
40	•0	45.0	45 • 0	45.0	45 • 0	45.0	45.0	45.0	45.0	45.0
Α	46 • 7	54.0	<b>55•8</b>	63.5	65 • 0	66.2	64.9	64.0	57.7	57.4
D	57 • 7	62.5	64.2	67.6	69 • 1	70.3	69.6	69•3	64.7	64•5
OASPL	74.2	73 • 4	77.7	73.0	77 • 1	78 • 3	77.7	77-3	78.3	77•7
PNL.	•0	72 • 1	72.5	76 • 1	76.9	77.9	77.2	77.1	73.0	72.8
PNLT	•0	72.1	72.5	78.0	76.9	77.9	77.2	77.1	73.0	72.8

### TABLE A-III

### NOISE LEVEL FREQUENCY SPECTRA TIME HISTORY

HUGHES 300 C

OCTOBER 14 1976

EVENT 33. 76 MPH FLY BY. MIC. 150 METERS EAST

1/3 OCTAVE FREQUENCY BAND VS TIME (SECONDS)
(DB RE 20 MICRO PA)

BAND	-21.5	-16.0	-10.5	-5.0	-•5	C	•5	€+0	11-5	17:0	18-5
17	54.4	58 • 7	63 • 4	67.5	66 - 1	65 • 6	<b>63</b> • 5	58 • <b>5</b>	58 • 5	53.8	•0
18	52.4	57.8	59.7	63 • 4	63.0	64.3	63.7	61.3	56.5	54.6	•0
19	55.7	56 • 4	59.3	61.8	63.6	64-1	63.9	61.7	60 • 1	57.7	• 3
20	54.4	59.4	62.2	62.7	60 • 8	60.2	59 • 3	64.4	59.2	57.6	•0
ខរ	50.4	55.5	57 . 4	58.9	58.7	59.9	59.9	59.3	54.7	53 • 6	•0
55	50 + 4	53.5	56+6	55.5	58 • 1	57.7	57.7	57.9	54.2	54.3	•0
23	53 • 7	53 • 8	57.3	58 • 8	64 • 6	65.2	65 - 1	56.5	54-1	51.3	• 0
24	44.9	50 • 6	53 • 8	55.8	57.6	57.5	56.7	57.9	50.9	48.5	•0
25	42.9	47 .8	55•3	55.8	52 • 4	52.5	53.0	56.2	50 • 1	45.6	• 0
26	41.4	49.3	54.6	51.3	61.9	62 • 1	62.0	52.8	53.9	45.0	•0
27	44.9	52 • 1	52.9	59 • 4	58 • 7	58•2	57.4	55 • 3	52.7	47.1	•0
28	47.4	52 • 0	51.8	59.3	62.8	62 • 3	61.8	56.2	47.2	48.6	•0
29	41 • 4	49.1	58•0	59 • 8	62.0	61.8	61.2	54.0	48 - 8	48.6	•0
30	43.9	54 • 5	55 • 4	59.0	60 • 9	61 • O	59 • 6	55 • 4	49.5	46.8	• ()
31	42.7	49.9	57 • 0	57 • 1	58.7	58 • 4	57 • 4	55.0	47.7	45.3	• O
32	40 • 4	48.2	50.9	54.5	56 • 8	56+9	55.9	53 • 4	45.7	45.4	•0
33	40 -4	45.0	48 • 5	51 • 8	54.4	54.3	53 • 1	51.0	45.0	45.0	•0
34	40 • 4	45.0	45.7	47.2	51.9	52 • 3	51.8	47.9	45.0	45.0	•0
35	40 • 4	45 • 0	45.0	45 • 0	47 • 6	47.5	46.9	45.0	45.0	45.0	•0
36	40 • 4	45.0	45.0	45 +0	45.0	45.0	45.0	45.0	45.0	45+0	•0
37	40 • 4	45 • 0	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0	•0
38	40 • 4	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0	•0
39	40 • 4	45.0	45.0	45.0	45.0	45+0	45.0	45.0	45.0	45.0	•0
40	40 • 4	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0	•0
A	52 • 2	59•0	63.0	65 • 9	68 • 4	68 • 2	67 • 7	63.3	57.3	54.7	•0
D	59.7	63 • 8	67.0	69.5	71.9	72.1	71.4	68 • 1	63.5	61.7	5 • 0
OASPL	70 . 7	72.0	73 -8	77•9	75 • 1	75 • 6	75 - 1	72.8	70.1	68 - 3	•0
PNL.	68 • 2	73.2	75 • 8	77.5	79 • 6	79•5	79.0	76•5	73.0	72.1	•0
PNLT	69•6	74.9	77 • 3	77 - 5	79.6	79 • 5	79.0	76.5	73.0	72 - 1	• 0

### TABLE A-III

#### NOISE LEVEL FREQUENCY SPECTRA TIME HISTORY

#### HUGHES 300 C

OCTOBER 14 1976

EVENT 34, 76 MPH FLY BY, MIC . 150 METERS EAST

1/3 OCTAVE FREQUENCY BAND VS TIME (SECONDS)
(DB RE 20 MICRO PA)

BAND	-25.0	+19.5	-14-0	-8•5	-3.0	0	1.5	2.5	8.0	13.5	16.5
17	•0	56 • 2	59.6	58•7	65•0	61 • 4	60.9	62 • 1	62.4	65•8	60.8
18	•0	51 • 6	54.9	56.3	59 • 6	60.9	58 + 5	58 • 8	57.3	61.7	56.6
19	•0	55 • 4	56.2	54.4	59.8	58.5	56.6	58 • 4	59 • 7	64.5	62.4
20	•0	62.9	67.2	63.3	61.2	60 - 2	57 • <b>7</b>	60.7	66.9	70.9	69.0
21	•0	51.0	56 ∘ 4	51 • 8	51.0	52 • 4	51.4	52.8	51 • 3	54.7	52 • 6
22	•0	50.2	50 • 4	48 • 8	51 • 1	56 • 8	52.7	52.9	54.6	53.0	51.4
23	•0	58 • 0	55.6	54.9	57.8	61.3	58 • 9	58 • 4	58•5	56 • 4	54 • <b>7</b>
24	•0	48 • 8	46.9	54.2	58.0	57.6	56.0	55 • 6	56•3	54.4	49.4
25	•0	49.0	53 • 4	60.0	56 • 4	54.7	53.7	53 • 3	55.0	53 • 1	49.6
26	•0	47.4	58.8	56.4	53 • 4	57.3	57.5	56 • 1	51.6	54.8	52.5
27	•0	47.2	56•6	50 • 5	59.9	58 • 1	57.8	56 • 8	55•3	51 • 6	50.6
28	•0	46 • 3	53 ⊌8	54.6	54.1	55 • 5	56 • 4	55 • 4	51.9	53.4	50.8
29	•0	46 • 5	49.9	51.5	57 • 4	55 • 5	57.2	56.2	51 • 8	56 • 1	54.0
30	•0	45.0	53.9	53.5	57.3	56.6	58.7	57 • 1	51.8	51.9	47.5
31	•0	45 • 2	50 • 4	51.7	56.3	56+9	59.1	56 • 3	51.7	50 • 1	46.8
32	•0	45 • 0	50 • 0	49.5	54.7	54.5	56.4	54.5	50.2	48.8	45.8
33	•0	45 • 0	46.0	47 • 4	51.5	53.1	54.3	52.3	48.7	46.2	45.0
34	•0	45 • 0	45.0	45.0	48•7	51.3	50.8	50 • 6	46 • 1	45.0	45.0
35	•0	45.0	45.0	45.0	45 • 1	46.0	46.4	46 • 1	45.0	45.0	45.0
36	•0	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0
37	•0	45 • 0	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0
38	•0	45.0	45 • 0	45 • 0	45 • C	45.0	45.0	45.0	45.0	45.0	45.0
39	•0	45.0	45.0	45.0	45 • 0	45.0	45.0	45,0	45.0	45.0	45.0
40	•0	45 • 0	45.0	45.0	45.0	45.0	45.0	45•0	45.0	45.0	45.0
Α	45•4	54 • 9	61.5	61.4	64 • 8	64.9	66 • 1	64.5	60 • 8	61.3	58.2
D	55•9	62 • 6	66 • 4	66•5	69 • 4	69 • 8	70 • 1	68 • 8	67.0	67•7	65.5
OASPL	62.7	67 • 9	71.8	73.6	77 • 7	76 • 1	76.9	76 • 1	76 • 5	78 • 1	75.0
PNL	•0	72.3	75 • 1	74.9	76.9	77 • 5	77 • 8	76 • 8	74.8	76 • 4	74.5
PNLT	•0	72.3	76 • 4	76 • 1	76•9	77•5	77.8	76.8	74.8	77 - 6	76 - 1

# TABLE A-II

## NOISE LEVEL FREQUENCY SPECIRA TIME HISTORY

#### HUGHES 300 C

OCTOBER 14 1976

EVENT 26, 60 MPH FLY BY, CENTERLINE MIC. ( SOFT SITE )

1/3 OCTAVE FREQUENCY BAND VS TIME (SECONDS)
(DB RE 20 MICRO PA)

BAND	-24.0	-18-0	-12.0	-6.0	0	6•0	12.0	18.0
17	54.9	67.5	65.9	65-4	61.5	58 • 7	56:2	•0
18	50.9	63.5	59.9	60 • 5	55.6	56 • 1	55.6	•0
19	50 • 4	61.8	59+1	58 • 5	55 • 8	56 • 0	58 • 7	•0
20	56 • 4	60 • 5	63.2	59.4	68 • 1	55.9	56.3	•0
21	50.9	57 • 7	56 - 1	55 • 4	60.2	55.0	55.0	•0
22	50 • 4	55.2	55.0	55 • 1	58.0	61.7	55.0	•0
23	54.9	55 • 0	55.0	66.2	63.3		55.0	•0
24	50 • 4	55 • 0		57.0	59.8		55 • 0	•0
25	50 • 4	55 • 5	62.6	57 • 1	66 • 4	55.0	55.0	•0
26	50 • 4	55 • 1	58 • 8	60 • 1	60.5	55 • 4	55.0	•0
27	50 + 4	55+0	55 • 0	59.4	58 • 1	56+7	55+0	•0
28	50 • 7	55 • 0	55 - 0	57 • 3	58•9		55.0	
29	50 • 4	55 • 0		56.7	59.4	56 • 1	57.7	•0
30	50 • 4	55.0	55.0	57.2	60 • 4	56.6	55.0	•0
31	50 • 4	<b>55•</b> 0	55.0	56 • 1	59.5	56.7	55.0	•0
32	50 • 4	55.0	55.0	55 - 1	57.8	55.9	55.0	•0
33	50 • 4	55•0	55.0	55.0	57.3	55 • 5		•0
34	50 . 4	55.0	55.0	55.0	57.0		55.0	•0
35	50 • 4	55 • 0	55.0	55.0	55.0	55.0	55.0	•0
36	50 • 4	55 • 0	55.0	55.0	55.0	55.0	55.0	•0
37	50 • 4	<b>55 •</b> 0	55.0	55.0	55.0	55.0	55.0	•0
38	50 • 4	55 • 0	55.0	55.0	55.0	55.0	55.0	•0
39	50 • 4	55.0	55.0	55.0	55.0	55.0	55.0	•0
40	50 • 4	55 • 0	55+0	55.0	55.0	55.0	55 • 0	•0
A	55.2	58 • 7	61.9	64.9	68.5	64.4	61 • 1	•0
$\mathbf{p}$	63.9	68 • 8	69.7	71 - 3	73.9	71 • 1	68 • 7	5.0
OASPL	66.4	75 • 1	74.6	74.6	75.6	74.5	69 - 1	•0
PNL	76 • 4	81.0	81.2	81 • 7	83 • 1	81 • 4	80.8	•0
F:vLT	76 • 4	81.0	81.2	81.7	83 • 1	81 • 4	80 • 8	•0

# THELE A-VI

#### NOISE LEVEL FREQUENCY SPECTRA TIME HISTORY

HUGHES 300 C

OCTOBER 14 1976

EVENT 27. 60 MPH FLY BY. CENTERLINE MIC. ( SOFT SITE )

1/3 OCTAVE FREQUENCY BAND VS TIME (SECONDS)
(DB RE 20 MICRO PA)

BAND	-37.5	-30.0	-22 • 5	-15.0	-7•5	0	7.5	15.0	18.0
17	e , ,	ra o	E0 E						
17	56 - 4	58 • 3	59 • 5		64.0	60.2	58 • 1	57.7	<b>57 •</b> 5
18	54 • 9	56 • 4			60.2	57 • 1	58 • 8	56.0	57.5
19	51 • 4		55•0		56•6	58.6		57.6	<b>56</b> ∘ 6
20	55•7		63.5		60 • 7		58 • 6	58 • 5	58.0
21	53.2			56 • 1			55.0	55.0	55 • 3
22	50 • 4		55•0		57•3	64.2	55 • 1	55.0	55.0
23	53 • 7		55 • 0		66 - 1	65.0	56 • 1	55.0	55.0
24	50 • 9	55 • 0		55.2	55•3	63.5	55+9	55.0	55.0
25	50 • 4	55.0	55.0	59.1	60 • 6	64.5	55.0	55.0	55.0
26	50 • 4	<b>55•</b> 0	57 • 5	55.0	57 • 8		55 • 0		55.0
27	50 • 4	55 • 0	55•9	55.2	59.0	8.36			55.0
88	50 • 4	55•0	55.2	55.0	56.2	62.8	55.5	55+0	55.0
29	50.7	55.0	55.0	55.0	55-7	62.2	55.5	55.0	55+0
30	50 • 4	55 • 3	55.0	55.0	5ა∙5	60.7	57+3		55.0
31	50 • 4	55•0	55.0	55+0	55•8		55 • 7		
32	50 • 4	55•0	55.0	55.0	55.0				55.0
33	50 • 4	55.0	55 • 0	55.0	55.0	56.5	55.0	55.0	55.0
34	50 • 4	55.0	55 • 0	55.0	55 ∙ 0	55.0	55.0	55.0	55.0
35	50 • 4	55.0	55+0	55.0	55.0	55.0			55.0
36	50 • 4	55 • 0	55.0	55.0	55 + 0	55.0	55.0	55.0	55.0
37	50 • 4	55.0	55.0	<b>5</b> 5•0	55.0	°5•0		55.0	55.0
38	50 • 4	55 • 0	55.0	55.0	55.0	55.0	55 • 0	55.0	55 • 0
39	50 • 4	55.0	55+0	55.0	<b>55 •</b> 0	55.0	55.0	55.0	55.0
40	50 • 4	55 • 0	55 • 0	55.0	55.0	55.0	55.0		55.0
Α	55 • 7	59.5	60.3	59.9	64.8		62.7		57.8
D	64 • 4	68 • 6	68.7	69.0	71.4	74.4			68.0
OASPL	69.9	69.2		73.4	74.8	77 - 1	72.8		70 • 4
PNL	76 • 4	80.8	80 • 9	81 - 1					80.7
PNLT	76 • 4		80 • 9		81.6				80 - 7

## TABLE A-III

#### NOISE LEVEL FREQUENCY SPECTRA TIME HISTORY

HUGHES 300 C

OCTOBER 14 1976

EVENT 28, 60 MPH FLY BY, CENTERLINE MIC. ( SOFT SITE )

1/3 OCTAVE FREQUENCY BAND VS TIME (SECONDS)
(DB RE 20 MICRO PA)

BAND	-26.5	-20.5	-14-5	-8•5	-2.5	0	3•5	9•5	15.5	18.5
17	58•5	59•7	58 • <b>7</b>	64.0	61.6	64.3	61 • 1	57.8	53 • 3	52+2
18	54.3	54 • 8	53 - 1	59.1	56 - 9	58 - 0	56-5	55.4	52 - 3	51.5
19	53.5	54 • 1	55 • 3	59.8	53 • 5	58.9	57.9	56.0	57.9	57.9
20	58 • 9	61 • 1	61.1	63.0	57.2	65.9	64.0	55.1	54.5	55 • 3
21	50 • 4	52 • 4	53 • 5	54.2	53.9	59.5	67.9	51 • 4	47.8	49.5
22	47.1	47.5	47.7	47.2	55•3	58 • 6	66.5	54.8	47.1	51.7
23	51.5	51 • 0	52 • 3	61.8	66 • 4	54.8	66.7	51 • 6	45.0	47.1
24	46 • 1	45.2	46.5	53.9	52.0	59 • 0	63.3	56.5	48 • 3	45.6
25	45 • 4	46 • 6	57 • 1	62.9	<b>57 •</b> 8	62 • 6	67.2	53.2	48 • 9	45.0
26	45•4	47 • 6	59.9	56.9	60 • 3	57.3	62.3	48 • 7	50 • 4	49.8
27	48 • 8	49.5	56 • 4	57 • 1	56 • 8	57.9	63•8	52 • 4	48.2	51.8
28	47.2	49.5	50 • 7	57 • 8	54.0	57.9	62.5	51 • 6	46.6	46.2
29	46 • €	46 • 6	50.2	50 • 9	56.6	57 • 8	62.0	52.8	50 • 3	45 • 1
30	45•3	46 • 5	52 • 1	55•2	57 • 1	57.9	60 • 6	50.9	47 • 1	47.3
31	45 • i	46 • 7	47.7	54.9	56 • 4	58 • 3	59•5	50.9	46 • 8	47.9
32	45 • 0	45 • 0	46 • 2	52.7	55 • 3	56•6	57 • 1	50.0	45 • 1	45 • 6
33	45.0	45.0	45.0	50 • 5	53.2	55•6	54.8	48.2	45.0	45 • 0
34	45 • 0	45 • 0	45 • 0	48.3	53 • 4	54 • 5	51.8	45.2	45 • 0	45.0
35	45 • 0	45 • 0	45.0	45.0	46 • 6	49.7	46 • 6	45 • 0	45 • 0	45.0
36	45.0	45 • 0	45 • 0	45.0	45.0	46.5	45.0	45.0	45.0	45.0
37	45.0	45.0	45 • 0	45.0	45.0	45 • 0	45.0	45.0	45.0	45.0
38	45 • 0	45•0	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0
39	45•0	45.0	45 • 0	45.0	45.0	45.0	45.0	45.0	45.0	45.0
40	45•C	45 • 0	43.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0
A	53 • 2	54 • 5	60 • 4	64 • 4	65.7	67.0	70.0	59•6	55 • 5	<b>5</b> 5•0
Ŋ	60 • 9	61 • 7	64.9	68.9	70 • 4	71.7	74.3	64.6	61.0	61.1
OASPL	69 • 4	71.3	69.5	73.8	73•9	76 • 4	78 • 8	72 • 3	66 • 4	6 > 0
PNL	71 • 7	72 - 1	74.7	77 • 1	78•3	80.0	81.8	73.6	72.0	72.0
PNLT	71.7	72 • 1	75 • ช	77.1	79.5	80 • 0	81.8	73.6	73 • 1	72.0

#### NOISE LEVEL FREQUENCY SPECIRA TIME HISTORY

#### HUGHES 300 C

OCTOBER 14 1976

EVENT 29, 69 MPH FLY BY, CENTERLINE MIC. ( SOFT SITE )

1/3 OCTAVE FREQUENCY BAND US TIME (SECONDS) (DB RE SO MICHO PA)

BAND	-32.5	-26.0	-19.5	-13.0	-6.5	0	6+5	13.0	14.5
17	50.5	55 • 2	58.0	56.5	56•8	56 • 8	53.5	51.8	53 <b>•3</b>
18	49.0	52 • 0	51.3	51 • 8	56 • 1	49.5	52.7	51.4	53 - 1
19	48.2	52 • 4	53 • 1	52.2	51.9	56 • 8	49.5	57.1	58.7
20	57 • 7	64.1	62.6	63.5	58.6	68 • 1	50.2	56.9	57.6
21	45.6	52 • წ	51.7	50.9	48 • 4	57.5	50.3	46.6	48 • 4
22	44.3	46.2	45.9	45.1	50.0	58.0	60.4	45.2	46.3
23	56 • 8	58 • 7	54.3	45 - 6	62.6	63 • 1	60.3	45 • 1	45.1
24	44.2	47 • 4	45.4	45.7	55.5	61.0	50.9	52.8	52.0
25	43.5	45•3	45.6	53 • 3	58 • 4	64.1	54.3	51.9	53.6
26	44.0	45.0	49.3	51.3	54.3	57.9	56.9	51.4	<b>5</b> 5•9
27	43 • 5	45 • 0	51 - 1	49 - 1	54.7	57.8	55.3	46.1	52.3
28	44.1	45 • 1	50.5	45.0	50 • 1	58 • 1	54 • 4	52.0	51.0
29	44.0	45 • 8	46.6	46.3	50.5	57.2	54.7	50 • 4	54.9
30	43.5	45 • 5	46 • 1	45.0	51.3	58.3	55 • 6	53.0	52.0
31	43.5	45 • 0	45.9	45.7	50 • 3	58 • 3	56 • 1	50.8	52.7
32	43.5	45 • 0	45.0	45.0	47 • 1	56 • 1	54.3	48.9	48 • 6
33	43.5	45 • 0	45.0	45.0	46 • U	56.6	52.5	46 • 4	46.0
34	43.5	45 • 0	45.0	45.0	45.2	54.5	48.9	45.0	45.0
35	43.5	45 • 0	45.0	45.0	45.0	49.8	45.7	45.0	45.0
36	43 • 5	45 • 0	45.0	45.0	45.0	46.5	45.0	45.0	45+0
37	43.5	45 • 0	45.0	45.0	45.0	45.0	45.0	45.0	45.0
38	43.5	45 • 0	45.0	45.0	45 • 0	45.0	45.0	45.0	45.0
39	43.5	45 • 0	45.0	45.0	45.0	45.0	45.0	45.0	45.0
40	43.5	45 • 0	45.0	45.0	45.0	45.3	45.0	45.0	45.0
Α	51 • 6	53 • <b>7</b>	55•6	54.4	60 • 5	67.2	63.8	58.9	60 • 3
D	59•3	61 • 9	61.9	61.9	65 • 8	72.2	68.3	63.4	64.2
OASPL	65 • 3	69•3	66.9	69 • 5	69•6	75 • 1	70.3	65•8	68•2
PNL	70.3	72 • 1	72.3	72 • 1	74.7	80 • 1	76.5	72.9	73.5
PNLT	70.3	72 • 1	72.3	72.1	74.7	80 • 1	76.5	74.2	74.6

#### NOISE LEVEL FREQUENCY SPECTRA TIME HISTORY

HUGHES 300 C

OCTOBER 14 1976

EVENT 30, 69 MPH FLY BY, CENTERLINE MIC. ( SOFT SITE )

1/3 OCTAVE FREQUENCY BAND VS TIME (SECONDS)
(DB RE 20 MICRO PA)

BAND	-51.0	-15.5	-10.0	-4.5	-1.0	0	1.0	6•5	12.0	17.5	18.0
17	55 • 4	55•5	58.6	57.6	56.2	57.5	55.2	51.5	50.5	52.0	-0
18	53 • 7	51.7	52 ∙ ੪	54.2	52.0	51.9	49.9	52.4	49.9	49.5	•0
19	52.7	51.6	55.9	53.0	52.0	56 • 4	57.5	50 • 5	56.9	55.4	•0
20	51.9	61.3	60.8	53 • 6	63.5	66.8	67.3	49.5	54.3	53.2	•0
21	45,7	52 • 8	52.9	49.5	56 • 3	56 • 7	55+8	47.4	48 • 6	48 - 1	•0
22	41.9	45 • 1	45.2	51.8	57 • 1	57 • 1	55 • 6	62 • 1	45.0	47.4	•0
23	41.9	49 • 4	56.0	65 • 8	66 - 1	63 • 4	60 • 4	61.2	45.0	45 • 1	۰٥
24	40 • 4	45.2	49.9	54.9	55.8	57.6	59.2	55 • 4	50.7	45.0	•0
25	43.7	50 • 5	61.0	53 • 6	63.3	63 • 4	61.8	52 • 1	51.6	45.0	•0
26	46 • 4	50•9	57 • 6	60.0	55 • 3	56.9	58 • 3	56.9	52.7	45.6	•0
27	47.2	50 • 8	50 • 0	54 • 8	59.3	57.4	55.6	53 • 6	50.0	48.9	•0
28	44.4	49.9	52.2	55.0	55 • 3	57.5	57.0	54.8	49.9	48.7	• 0
29	45 • 2	48 • 4	52 • 8	53 • 1	55.2	55+9	56 • 5	54.8	51•9	45.2	* Ü
30	43.2	50 • 3	52 • 1	52 • 6	56.6	57.9	58 • 0	55 • 5	49.4	46.4	• 0
31	40 • 9	47 • 7	49.5	52.2	56.7	57.4	57.9	54.8	49.1	45.5	•0
32	40 • 4	46 • 8	47.2	50.3	55 • 6	55 • 7	55.2	51.8	47.2	45.0	۰0
33	40 +4	45 - 1	45.2	47 • 1	53•5	54.9	55.4	50 • 0	45.3	45.0	•0
34	40 • 4	45.0	45.0	45.7	53.6	54 • 4	53.5	46.2	45.0	45.0	•0
35	40 • 4	45 • 0	45.0	45.0	47 • 1	40.3	48 . 8	45.0	45.0	45.0	• 0
36	40 • 4	45.0	45.0	45.0	45.0	46.3	46.3	45.0	45.0	45.0	• 0
37	40 • 4	45.0	45.0	45 • 0	45.0	45.0	45.0	45.0	45.0	45.0	• 0
38	40 • 4	45 • 0	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0	• 0
39	40 • 4	45 • 0	45.0	45.0	45.0	45 • 2	45.2	45.0	45.0	45.0	• 0
40	40 • 4	45.0	45.0	45 • 0	45.0	45.3	45.2	45.0	45.0	45.0	• 0
A	50 • 9	<b>57 •</b> 0	60 • 7	62.6	66 • 1	66•6	66 • 5	62.9	57.9	53.0	• 0
υ	56 • 2	62 • 3	65•5	67.6	70 • 7	71 • 4	71.3	67.5	62.7	59.9	5.0
OASPL	62 • 4	67 • 3	69.3	70.7	73 • 4	73 • 6	73.5	71.7	66.0	65 • 1	•0
PNL	68 • 0	72.6	74.8	76 - 4	78•9	79•6	79 • 1	75.5	72.6	71.5	•0
PNLT	68•0	72 • 6	74.8	76 • 4	80.0	79•6	79 • 1	75 • 5	72 • 6	71.5	• 0

#### NOISE LEVEL FREQUENCY SPECIRA TIME HISTORY

#### HJGHES 300 C

OCTOBER 14 1976

EVENT 31. 76 MPH FLY BY. CENTERLINE MIC. ( SOFT SITE )

1/3 OCTAVE FREQUENCY BAND VS TIME (SECONDS)
(DB RE 20 MICRO PA)

BAND	-31 •5	-24.5	-17.5	-10-5	-3•5	0	3.0	3 • 5	10.5	17.5	19•0
17	•G	56 • 1	62.0	60 • 6	59.9	62.7	58 • 1	58.2	59.5	58∙8	55•9
18	•0	52 • 4	57.0	56.0	55.0	55 • 4	53 • 1	53.5	57.8	54.8	52.3
19	•0	50 • 6	55.9	52 • 4	53.0	54+8	55.8	55+9	55 • 6	56.2	57 • 6
20	•0	56 • 4	62.3	61.3	52.5	67 • 4	68.3	67.7	58.6	57.3	58.9
ខរ	•0	49.0	52.9	52 • 4	51.9	59.3	57.0	56.5	52.2	52.0	51.5
22	•0	45 • 4	47.2	45 • 6	51.0	56.2	55.6	55.7	54.2	49.5	51.3
23	•0	53.2	50.9	53.0	66.3	64.9	60.9	62.2	57.6	49.9	52.2
24	•0	45 .0	45.7	47.4	55 • 7	57 • 7	61.0	62.2	56.7	53.7	53.0
25	•0	45.0	46.4	58 • 8	55.3	65 • 4	64.0	64.1	51.9	52.6	52.2
26	•0	45.0	47.2	55 • 3	62.3	58 • 2	61 • 4	60.9	53.3	52.9	54•5
27	•0	45.0	46.6	47.6	55.7	57 • 4	56.4	56.9	55.8	49.3	52.9
28	•0	45.0	45.0	46.1	57.0	<b>57</b> ⋅5	57.6	58 • 1	53.0	48 • 1	52.4
29	•0	46.2	45.0	45.4	53.6	56 • 6	56.5	56 • 6	53.5	49.5	51.0
30	•0	45.5	45.0	45.0	53.2	57.4	57.9	57.7	54 • 4	49.7	48 • 4
31	•0	45.0	45.0	45.0	52.7	56.7	57.6	57.4	53 • 3	48 + 3	49.0
32	•0	45.0	45.0	45.0	49.9	54.7	55.7	55.5	51.8	46.1	47.3
33	•0	45.0	45.0	45.0	47.8	53 • 4	55 • 4	55.3	50•3	45 • 1	46.0
34	۰0	45.0	45.0	45.0	48.0	52.2	55 * 1	54.7	47.1	45.0	45.0
35	•0	45.0	45.0	45.0	45.0	46.8	49.3	49.3	45.0	45.0	45.0
36	•0	45 • 0	45.0	45.0	45.0	45.0	45.5	45.7	45.0	45.0	45.0
37	•0	45.0	45.0	45.0	45.0	45 • 0	45.0	45.0	45.0	45.0	45.0
38	•0	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0
39	•0	45.0	45 • 0	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0
40	+0	45 • 0	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0
A	45 • 4	51.5	51.9	56.8	63 • 6	66 • 4	67.0	67 • R	61.8	57 • 1	58 • 6
D	55•4	60.0	61.2	63.3	68.5	70.9	71.7	72.0	66 • 4	68 • 8	63.5
OMSFL	60.2	68•0	72.5	70•7	73.5	75 • 7	74.7	74.5	72•9	70 • 4	68•7
PNL	•0	71.5	71.8	73.0	77.0	79 • 3	80.0	80.0	75 • 1	72•7	73.3
<b>PNLT</b>	•0	71.5	71.8	73.0	77.0	79•3	80.0	80.0	75 • 1	72.7	73•3

#### NOISE LEVEL FREQUENCY SPECTRA TIME HISTORY

#### HUGHES 300 C

OCTUBER 14 1976

EVENT 33, 76 MPH FLY BY, CENTERLINE MIC. ( SOFT SITE )

1/3 OCTAVE FREQUENCY BAND VS TIME (SECONDS)
(DB RE 20 M1CRO PA)

BAND	-25.0	-19-0	-13.0	-7.0	-3.0	-1 •0	0	5•0	11.0	17.0
17	63+6	57 • 4	61 + 6	60 • 9	63 • 9	61-8	63 = 5	63.3	58 • 2	56.0
18	59 • 8	58 • 5	59.5	58 • 1	61.6	58 • 4	61.8	62.0	56 • 7	54.9
19	57 • 7	61 • 6	61.6	60 • 4	62.8	61.5	61.6	58.0	58 • 4	56.7
20	60 • 3	60 • 6	62.5	61.2	62.9	67.5	69.2	58.9	57.6	55.4
21	56 • 6	57 • 4	61.4	57.8	62 • 7	61 • 8	60 • 7	57.0	56.2	52 • 1
22	52 • 1	56 • 6	58 • 1	55 • 1	59.6	60 • 1	59 • 3	62 • 1	52.8	50.0
23	59.0	56.5	55.9	62.3	71.4	67.0	62.7	62.8	51.6	48.3
24	50 • 5	50 • 5	52.0	54 • 6	60 • 3	57.7	59 • 3	54.1	52.2	46.2
25	49.7	48.3	58 •2	60 • 0	61.6	68 • 2	67.1	53 • 3	50 • 4	45.0
26	45.7	47.0	54.9	50 • 3	64.6	60.7	61.7	58 • 8	52.5	46.6
27	44.5	45.8	49.5	54.0	60 • 5	60.8	57.2	54.2	51.7	50.4
28	46.2	46.3	45 • 9	51.3	61 - 1	59.3	58.9	54.6	46.4	49.3
29	48.7	45 • 5	50 • 0	51.0	59.5	56 • 6	56.9	54.9	49.9	45.2
30	47.3	46 • 1	48 • 8	49.6	59.0	56.9	57.5	56 • 4	47.6	45.9
31	46 • 3	45 • 7	50.8	49.5	57 • 1	56 • 4	57.3	55.7	49.2	45.5
32	44.3	45.0	47.0	46 • 4	55 • 6	55 • 4	56.5	54.0	47.3	45.0
33	43 • 5	45.0	45 • C	45.0	54.0	54.0	56.0	52.0	46.1	45.0
34	43.5	45.0	45.0	45.0	52.0	52.9	54.7	49.2	45.0	45.0
35	43.5	45.0	45.0	45.0	46.3	48 • 5	50 • 6	45.5	45.0	45.0
36	43.5	45.0	45 • C	45.0	45 . 0	45 • 1	47.2	45.0	45.0	45.0
37	43.5	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0
38	43.5	45 • 0	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0
39	43 • 5	45 • 0	45•0	45.0	45.0	45.0	45.0	45.0	45.0	45.0
40	43.5	45 • 0	45.0	45 • 0	45.0	45.0	45.0	45.0	45.0	45.0
Α	55 • 8	54.7	59 • 4	60 • 4	69.2	68 • 1	68.0	64.2	57.1	54.2
D	62 • 7	8 • 86	65.2	66.2	73 • 4	73.0	72.9	69 • 1	63.1	60.8
OASPL	71.5	70.9	72.1	75 • 1	77.8	76.2	76.9	74.3	71.1	68 • 3
PNL	71.6	72.6	74.1	74.9	81.8	81.0	80.9	76.9	72.9	71.8
PNLT	71 • 6	72.6	74 • 1	74.9	81.8	81.0	80.3	76.9	72.9	71.8

## TABLE A-III

#### NOISE LEVEL FREQUENCY SPECTRA TIME HISTORY

#### HJGHES 300 C

OCTOBER 14 1976

EVENT 34. 76 MPH FLY BY. CENTERLINE MIC. ( SOFT SITE )

1/3 OCTAVE FREQUENCY BAND VS TIME (SECONDS)
(DB RE 20 MICRO PA)

BAND	-19.0	-14.0	-9•0	-4.0	0	1.0	6.0	11.0	16.0	17.0
17	63.6	66•0	62•6	59.0	62.7	63•6	60.9	52•8	53•4	53•3
18	59.6	63.0	60•9	58.7	56.5	58 • 7	56.4	53 • 2	51.8	51.5
19	57 • 5	62.8	58 • 8	54.1	57•9	60 • 1	56.5	57.1	58•7	57.2
20	62 • 4	65.0	64 • 4	53.6	69.7	70 • 1	62.7	62.9	65.3	63•3
21	54 02	57 • 9	55•5	54.1	60.8	58 • 6	54.0	49.6	52.0	50.9
22	50 • 6	51.9	52 • 1	54.0	58•9	57.5	61.4	54.1	48 • 5	48 • 4
23	56•9	53 • 4	58.0	66.2	64-1	62 • 4	64 • 4	55•6	50.0	50.2
24	48 • 8	50 • 3	54.2	54.5	61.6	62 • 4	55.6	58 • 9	54.7	55.0
25	48 • 6	59.0	59•7	53.3	66.8	65 • 1	58.3	53.2	52.5	53.9
26	46.6	58 • 4	53 • 9	60.5	61 • 4	62.8	59 • 1	50 • 3	54 • 3	56 • 4
<b>27</b>	45.7	54 <b>• 5</b>	50.2	54.4	59.0	59.0	59.6	57.5	53 • 1	51.9
28	45 • 4	47.7	51 • 6	53.3	58.9	59.3	57.7	53 • 4	53•6	53.2
29	45.0	48.9	49.4	54.2	58 • 6	58 • 5	58 • 1	56 • 1	51.2	51.6
30	45.0	45.7	50•i	54.3	59•9	61 • 1	59.2	57.6	49.6	50 • 3
31	45.0	45.6	48 • 9	53.2	60.0	60 • 3	59 • 1	55.9	48.7	48 • 1
32	45.0	45 • 1	46.3	51.4	58•3	59.0	58.5	55 + 3	47.6	48.0
33	45 • 0	45 0	45.0	49.1	58 • 4	59•5	57 • 1	53.3	45.7	46.0
34	45 - 0	45.0	45.0	49.0	55.9	58 • 7	54.5	49.0	45.0	45.0
35	45.0	45.0	45.0	45.0	51.7	51 • 7	50.6	45.6	45 • 0	45.0
36	45.0	45.0	45.0	45.0	48.5	48.7	46.9	45.0	45.0	45.0
37	45 • 0	45.0	45.0	45.0	45.2	45.0	45.0	45.0	45.0	45.0
38	45 • 0	45.0	45.0	45.0	45.5	45.0	45.0	45.0	45.0	45.0
39	45.0	45.0	45.0	45.0	45 • 0	45.0	45.0	45.0	45.0	45.0
40	45 • 0	45.0	45.0	45.0	45.4	45.0	45.0	45.0	45.0	45.0
Α	53.2	59.3	59•8	63.2	69.2	69•9	67.7	64.3	59-4	59 • 4
D	62.9	65 • 8	65•8	68.3	74.3	75 • 1	72.6	68.2	64.5	64.3
OASPL	74.6	76.0	75.5	72.3	77.7	77.9	75.0	70.2	69.5	68.9
PNL	72.2	74.5	74.5	76.9	81.8	82.7	80.2	76.9	73.6	73.7
PNLT	72.2	74.5	74.5	76.9	81.8	82.7	80.2	76.9	73 • 6	73.7

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#### NOISE LEVEL FREQUENCY SPECTRA TIME HISTORY

HUGHES 300 C

OCTOBER 14 1976

EVENT 35, 82 MPH FLY BY, CENTERLINE MIC. ( SOFT SITE )

1/3 OCTAVE FREQUENCY BAND VS TIME (SECONDS)
(DB RE 20 MICRO PA)

BAND	-38.0	-30 • 5	-23.0	-15-5	-8•0	~1.5	<del>-</del> •5	o	7.0	14.5
17	•0	57 • 9	57.1	59•7	59 • 4	55•0	56 • 1	56 • 4	53•3	49.3
18	•0	56 • 3	52.7	51.7	53.8	53 • 2	50.8	50.3	51.8	48.5
19	•0	55 • 2	51.3	54.9	53 • 6	50 • 4	52 • 3	54.3	57.2	59.7
20	•0	54.6	61.1	61.4	61.7	61.6	65.7	67.2	63.9	52.8
21	•0	57 • 4	:55 • 4	58.0	51.9	55.9	55 • 8	55 • 5	49.5	49.6
22	•0	48 • 7	45.8	47.5	45.2	57 • 1	56.4	56 • 4	58•6	59.5
23	•0	49.7	47.7	54.4	56 • 8	68 • 4	65 • 3	63.9	64.0	53.3
24	•0	53 • 1	45.6	52.5	49.3	56.7	58.3	59 • 7	57.5	47.7
25	•0	46 • 6	47.6	49-1	57.6	64 - 1	64 • 1	63.5	60 • 3	49.4
26	<b>=</b> 0	45 - 5	47.9	52 • 1	54.6	59.4	56.1	57.6	55.0	51.7
27	•0	46.8	47.3	48.8	49-3	59.6	57•7	57 • 1	57.0	53 • 8
28	•0	49.2	45.9	48.4	51 - 1	56.7	56.5	57.1	52.6	50.6
29	•0	46 • 4	45.0	45.3	47.0	55.9	54.4	56.2	53 • 6	46.1
30	•0	45.0	45.0	45.0	47.5	56 • 3	55•7	56.8	54.5	47 • 7
31	•0	45.0	45.0	45.0	47.0	54.6	54.9	55.9	54.3	45.9
32	•0	45.0	45.0	45.0	45.7	53 • 6	53 • 6	54.3	51.2	45 • 4
33	•0	45 • 0	45.0	45.0	45.0	52.6	53 • 1	53•7	49.7	45.0
34	•0	45.0	45.0	45.0	45.0	51.8	52 - 1	52.5	46 • 4	45.0
35	•0	45.0	45.0	45.0	45.0	46.2	48.0	48.9	45.0	45.0
36	•0	45.0	45.0	45.0	45.0	45.0	45.9	46.2	45.0	45.0
37	•0	45.0	45.0	45 • 0	45.0	45.0	45•3	45.3	45.0	45.0
38	•0	45 • 0	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0
39	•0	45 • 0	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0
40	•0	45.0	45.0	45.0	45.0	45.0	45 • 3	45•3	45.0	45.0
Α	45.9	53 • 2	51.9	54.8	57 • 6	66 • 1	65 • 5	66.0	62•9	56.9
D	55•4	61 • 1	60.2	62 • 1	63.7	71.3	70 • 7	71 - 1	68 • 1	62•8
OASPL	54.9	71.0	67.9	69 • 1	68 • 5	73 • 6	73.9	74.6	71 • 7	66∘5
PNL	•0	71.9	71.8	72.5	73 • 1	79.3	78•5	78 • 8	76.5	72.7
PNLT	•0	71.9	71.6	72•5	73.1	79•3	78 • 5	78 • 8	76.5	72.7

#### NOISE LEVEL FREQUENCY SPECIAL TIME HISTORY

#### HUGHES 300 C

OCTOBER 14 1976

EVENT 36. 82 MPH FLY BY. CENTERLINE MIC. ( SOFT SITE )

1/3 OCTAVE FREQUENCY BAND VS TIME (SECONDS)

(DB RE 20 MICRO PA)

BAND	-27.5	-22.0	-16-5	-11.0	-5.5	0	5 • 5	11.0	13.5
17	53 • 3	58.2	53.7	57.4	55•5	54•5	53.0	48.0	50.0
18	51.1	55 - 1	50.8	49.3	55.2	50 • 7	49.2	49.6	50 • 9
19	56 • 2	57.7	51.4	52.2	55.6	55 • 7	53.6	56.8	58 • 2
20	54 - 1	60.7	62.4	65.7	58 • 7	64.7	51.5	53.6	53.4
21	46.3	49.9	49.8	52.8	49.8	54.9	51.8	46.8	45.7
22	43.7	46.9	45.8	46.6	48.0	56 • 5	60.8	50 • 4	45.5
23	5() • 4	55.5	57.4	54.2	60.2	63.6	58.2	48.0	45 • 7
24	43.5	4.5 • ♀	45.8	45.6	54.0	59.0	51.2	54.5	53 . 8
25	46.8	46.8	47.0	53.6	57.6	58 • 8	55.2	49.8	52.2
26	45 • 1	45.4	47.4	54.8	51 • 4	56 • 4	54.8	48.3	51 • 1
27	43.5	45.0	47.6	55∙6	54.9	56 • 1	55∙8	52.5	50 • 7
26	43.5	45.0	47.8	48.8	49.6	55 • 3	53 • 2	49.6	52.5
29	43.5	45.0	46 • 6	45.6	49.8	55 • 3	55 • 5	52.0	50.0
30	43 • 5	45.0	45 • 0	46.5	49.7	56.2	56 • 6	51.3	50.5
31	43 • 5	45.0	45.0	45 • 1	48 • 1	56•3	56.2	50.6	49.6
32	43 • 5	45.0	45.0	45.0	46 • 1	55 • 0	54.2	50.0	48 • 5
33	43.5	45.0	45.0	45.0	45 • 4	53 • 1	53.4	47.5	47.6
34	43•5	45.0	45.0	45.0	45.0	53.3	50 • 1	45.0	45.2
3 <del>5</del>	43 + 5	45.0	45.0	45•Q	45.0	48.3	47.1	45.0	45.0
36	43.5	45.0	45.0	45.0	45.0	45 • 5	45.0	45.0	45.0
37	43 • 5	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0
38	43.5	45.0	45 • 0	45.0	45.0	45.0	45.0	45.0	45.0
39	43.5	45.0	45.0	45.0	45.0	45 • 0	45.0	45.0	45.0
40	43.5	45.0	45 • 0	45.0	45.0	45 • 4	45.0	45.0	45.0
Α	49.0	51 • 4	53 • ೮	57.5	59 • 1	65 • 2	64.2	58•3	58 • 3
ນ	58.2	61 • 5	61.7	63 • 8	64.6	70 • 3	68 • 8	63.5	63.5
OASPL	67.0	69 • 5	67.0	69•3	68 • 7	74.0	70 • 0	66.0	65 • 9
PNL	70 • 3	71 -8		73.0	73 • 5	78 • 5	76.9	73.0	72.9
PNLT	70 • 1	71 -8	72.1	73.0	73.5	78 • 5	76.9	73.0	72.9

#### NOISE LEVEL FREQUENCY SPECTRA TIME HISTORY

HUGHES 300 C

OCTOBER 14 1976

EVENT 37, 82 MPH FLY BY, CENTERLINE MIC. ( SOFT SITE )

1/3 OCTAVE FREQUENCY BAND VS TIME (SECONDS)
(DB RE 20 MICRO PA)

BAND	-20.0	-15-0	-10-0	-5•0	<del>-</del> •5	0	5•0	10.0	15.0	17.0
17	53 • 7	58 • 6	57 • 6	59 • 8	57.5	57.5	63+5	58•8	58 • 3	•0
18	50 • 2	54.0	51.5	56 . 1	55.6	54.7	60.5	55.2	55 • 4	• C
19	49.9	52.3	53 • 0	54.1	54.6	55.9	57.4	60.0	58.2	•0
20	52.7	60 • 8	60.9	59.7	65 - 1	66.4	55.2	55.5	53 • 6	•0
21	46.7	51 • 0	52.5	50.8	55 • 3	56 + 3	53 . 9	52.3	52.5	•0
22	43 (9	47 • 1	46.9	49.6	56.3	56∙0	63.3	49.8	50 • 2	• 0
23	46.7	46.7	48 • 6	65 • 4	64 • 4	63.0	57 • 4	48.8	48.5	•0
24	41.9	45.2	46 + 6	54 • 4	58-2	59.3	57.1	53 • 1	48 . 1	•0
25	42.7	45.5	54 • 1	57 • 4	62.5	61.5	51 • 1	53+8	48 . 0	•0
26	40 • 4	47 .8	56 • 7	50•9	57 • 4	57.9	57.2	55 • 6	49-6	•0
27	40 - 4	49.4	50 • 8	54.7	58.2	56 • 8	54.8	52.7	49.4	•0
28	40 • 4	50 • 4	46.2	49 • 1	55.9	56.0	56.0	53.6	47.7	• 0
29	40 • 4	47.3	48.7	48 • 0	55+9	56.5	55.9	53 • 3	45.0	• 0
30	40 .4	54 • 1	46.7	47.3	56∙8	57.0	55.6	53 • 4	45.0	• 0
31	40 • 4	53•2	45.9	47.7	57.2	57.4	55 • 1	51.4	45.0	•0
32	40 - 4	50.2	45 • 0	45.5	56.0	56.3	52.6	51.0	45.0	•0
33	40 • 4	45.0	45.0	45.1	54 • 6	55.2	50.8	47.4	45.0	· O
34	40 • 4	45.0	45.0	45.0	54.2	54.0	46.8	45.0	45.0	• 0
35	40.4	45.0	45.0	45.0	48 • 8	49 - 1	45.0	45.0	45.0	•0
36	40 • 4	45.0	45+0	45.0	46.0	46 - 1	45.0	45.0	45.0	•0
37	40 • 4	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0	• 0
38	40 • 4	45.0	45.0	45.0	45 • 1	45 • 1	45.0	45.0	45.0	٠0
39	40 • 4	45.0	45.0	45.0	45.2	45.2	45.0	45.0	45.0	•0
40	40 • 4	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0	•0
A	47.4	59 - 1	56.9	59 <b>.7</b>	66 • 6	66 • 5	63.6	60.8	53 • 1	•0
D	<b>55.7</b>	63 • 3	62.8	66.0	71.6	71.5	68 • 1	64.9	60 • 8	5.0
OASPL	65.2	68 • 8	67.5	71.8	<b>7</b> 5 • 5	75.5	75 • 1	71.2	68 • 1	•0
PNI.	67 • 3	72.7	72.8	75.2	79.3	79.3	76.0	74.1	71.8	•0
PNLI	67.3	74.0	72.8	75.2	79.3	79.3	76.0	74.1	71.8	•0

## TABLE A-III

#### NOISE LEVEL FREQUENCY SPECTRA TIME HISTORY

#### HUGHES 300 C

OCTOBER 14 1976

EJENT 40. 90 MPH FLY BY. CENTERLINE MIC. ( SOFT SITE )

1/3 OCTAVE FREQUENCY BAND VS TIME (SECONDS)
(DB RE 20 MICRO PA)

BAND	-25 - 5	-19.5	-13-5	-7.5	-1-5	0	4.5	10.5	16.5	17.5
17	52 • 1	56 • 0	60.5	66.8	59.5	58 • 5	59 • 3	56•0	57.7	58 • 4
18	51.2	55 • 4	57.3	65.1	55+0	56 • 8	56.7	54.4	53 • 6	54.5
19	50 • 6	55.6	57.6	67.8	55.2	57.3	58 + 2	58.3	54.7	54.6
20	57.6	57 • 2	64.0	68 - 3	60 • 5	67.8	60 • 0	56.0	52 • 3	53.4
21	50 - 5	53.8	58.3	66 • 4	55-1	57.7	58 • 9	53.5	49.5	49.6
22	49.8	50 - 6	53.5	61.1	55.4	56 - 1	63 - 8	49-1	46.5	47.4
23	52.2	54 • 7	56.2	60.9	67.5	64.6	63.2	48.7	45.2	46.1
24	47 - 1	49.5	53.2	56.6	57.0	56 • 8	54.5	51.8	45.0	45.0
25	45 • 1	46 - 1	53.0	61.9	62.6	65.9	55 • 3	53.0	45.0	45.0
26	45.7	47.6	58 • 1	55.0	59.9	58 • 6	55 • 1	54.4	45.0	45.3
27	47.1	45.7	56 • 4	51.9	58 • 5	58 • 9	55+9	52.1	45.1	46.2
28	44.7	49.9	53 • 6	50.2	55.2	57.8	55.8	52.3	46.3	48.2
29	45.2	50 • 5	47 • 4	46.7	55 • 5	56 • 3	55.4	53.9	45.0	47.7
30	45.6	47 - 8	50 • 8	46.4	55 • 8	57 • 3	56 • 6	50 • 5	45.5	47.4
31	44.0	46.6	50.8	45.6	55+9	56 • 7	55 • 0	50 • 3	45.0	49.4
32	43.5	45 • 8	48.6	45.0	54.2	55 • 7	54.9	49.2	45.0	45.7
33	43.5	45.0	45 • 1	45.0	51.2	54 • 4	53 • 3	46.4	45.0	45.0
34	43.5	45.0	45 • C	45.0	50 • 8	53 • 3	50 - 0	45.0	45•0	45.0
35	43.5	45.0	45.0	45.0	46.7	49 • 0	46 • 9	45.0	45 • 0	45.0
36	43.5	45.0	45.0	45.0	45.0	46 • 1	45 • 2	45.0	45.0	45.0
37	43.5	45 • 0	45.0	45.0	45.0	45•0	45.0	45 • 0	45 0	45.0
38	43.5	45 - 0	45.0	45.0	45.0	45 • 0	45.0	45∙0	45.0	45.0
39	43.5	45 • 0	45.0	45.0	45 • 0	45.0	45.0	45•0	45•0	45.0
40	43.5	45.0	45.0	45.0	45.0	45 • 5	45 • 0	45.0	45 • 0	45.0
A	52 • 6	56 • 3	60 • 5	60.8	65•6	ნ7∙0	64.8	59•5	50 - 6	54.6
D	59•6	61 • 8	65 • 8	68 • 5	70 • 5	71.9	69 • 7	64-1	59 • 4	61.0
OASPL		67 • 4	72.7	75.7	73.5	76 • 1	73 • 1	69 • 8	64.3	70.0
PNL	70 • 5	72 • 4	74.7	76.5	78 <b>- 7</b>	79 • 8	77 • 6	73 • 4	7. •2	71.6
PNLT	70 • 5	72 - 4	74.7	76.5	78.7	74.8	77 • 6	73 • 4	71.2	71.6

# NOISE LEVEL FREQUENCY SPECTRA TIME HISTORY

HUGHES 300 C

OCTOBER 14 1976

EVENT 44. 6 DEGREE APPROACH. CENTERLINE MIC. ( SOFT SITE )

1/3 OCTAVE FREQUENCY BAND VS TIME (SECONDS)
(DB RE 20 MICRO PA)

BAND	-14.5	-11-0	-7.5	-4.0	5	0	1 • 5	3•0	6.5	10.0
17	64.9	63 • 3	61 • 2	65•6	61 • 1	61.2	60.7	57.0	59.5	63.4
18	58 • 6	53 • 3	54.2	58.3	56.2	55 • 6	56.9	59.0	56 • 4	58 • 4
19	57 • 1	57 • 7	53.6	56.8	55.9	57 • 7	59.9	53.8	60•0	61.0
20	60 • 3	61.9	62.4	57.9	67.3	68.2	69 • 1	59.3	58 + 7	60 • 3
21	53 • 6	55 • 1	53.7	56.6	59 +2	59 • 6	67.9	57.5	53 • 1	53.0
22	49.9	50 • 6	49.0	59.0	58 • 3	55,6	68 • 2	64.9	55 • 1	53•6
23	48.9	51.0	58 • 4	69.9	64.5	63.4	66 • 4	65.5	55 • 4	52.7
24	48-2	52 - 5	51 • 4	64-1	58 • 7	60.7	67.1	58 • 6	59 • 3	53.0
25	54 • 4	59.7	59.9	57.8	54.8	64,9	67 • 4	62 • 6	56•3	48.3
26	53 • 4	57.6	53.5	63.2	57.5	59.2	65.9	60 • 4	53 • 1	48 • 1
27	49.0	53 • 8	47.9	59.1	58 • 1	57 • 6	65•6	60•5	53 • 5	58.3
28	45 • 1	52 • 8	51.2	61.9	57.2	57 ° 7	63.9	59•5	54.6	49.9
29	45 • 6	54 - 1	47.7	58.5	57.0	58 • 0	61.8	58•3	52.8	47.0
30	45.0	50 • 4	49.1	57.6	57.5	58 + 6	60.6	57.8	53 • 4	48 • 1
31	45 • 4	51 • 4	47.8	56.5	56 • 8	57.3	60 • 3	57.4	53.3	48 • 3
32	45.0	46 - 1	45.9	53.2	55.7	56 • 9	58 • 2	55+0	51 • 5	46 • 1
33	45 • C	45.0	45.0	51.5	54.4	55•6	57 - 1	53 • 4	49 • 7	45.7
34	45.0	45 .0	45.0	49.4	54 • 4	54+0	53.8	50 • 7	47 - 1	45.0
35	45.0	45.0	45.0	45.4	49.6	50 • 4	49.3	46 • 4	47 • 5	45.0
36	45 • 0	45.0	45.0	45.0	46.9	47 • 5	46.8	45.0	45.9	45.0
37	45.0	45.0	45.0	45.0	45 • 1	45 • 1	45.0	45.0	45.0	45.0
38	45 -0	45.0	45.0	45.0	45.0	45 • 0	45.0	45.0	45.0	45.0
39	45.0	45.0	45.0	45.0	45 • 3	45 • 3	<b>45</b> • 0	45.0	45.0	45.0
40	45 • 0	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0
A	55 • 1	60 • 6	58.8	67.7	66 • 8	67.4	71 • 1	66•9	62 • 4	56.9
D	62.7	65 • 6	65 • 1	72.4	72.0	72.5	75.9	71.7	67.2	63+8
OASPL	73.9	75.5	71.3	76.2	74.3	75 • 8	79.1	76.2	73 • 4	73.9
PNL	72.4		74.0	80.3	79•9	80 • 1	32.9	78.9	75.5	72.9
PNLT	72.4	_	75.2	81.3	79.9	80 • 1	82.9	78.9	75.5	72.9

# TABLE A-III

#### NOISE LEVEL FREQUENCY SPECTRA TIME HISTORY

#### HUGHES 300 C

OCTOBER 14 1976

EVENT 58, 9 DEGREE APPROACH, CENTERLINE MIC. ( SOFT SITE )

1/3 OCTAVE FREQUENCY BAND VS TIME (SECONDS)
(DB RE 20 MICRO PA)

BAND	-7.0	<del>-</del> 5•0	-3.0	-1 •0	O	1 • 0	3.0	5•0	7.0
17	67.6	66.66 66.66	64 • 3	62.6	61 • i	63+4	63.1	64.3	63 • 3
18	60.7	61.5	58 • 2	56.5	57 • 1	58 • 7	63.2	63 • 1	(2.4
19	5K • 5	60.7	59.9	57.1	62 • 4	64 • 5	58.7	63 • 1	63.5
20	61.7	58 • 3	62.0	68 9	70 • 4	69.0	60 • 4	58 • 2	59.9
21	55.7	54.8	59.9	68.1	68.9	66.7	64.6	57.9	58.0
22	52.5	54 ∙ 8	64.2	70.5	70 • 0	69.7	66.9	62.7	49.8
23	64.5	66•4	69.0	68.9	65 • 4	66 • 3	66.9	61.4	53.9
24	59.0	<b>58•</b> 3	64.6	65.7	71 - 1	72.0	61.4	65 • 4	60 • 4
25	61.5	53.3	66.3	71.7	73.3	72.5	64.3	61.8	63 • 1
26	54.2	58 • 6	67.1	68 • 4	72.8	71.7	63.5	59 • 7	60 • 6
27	60 • 3	59.6	68 • 5	69.7	70 • 6	68 • 7	63.5	62 • 4	56.5
28	57 • 6	59.4	70.9	69.7	70 • 6	68+0	61.5	58 • 7	59•3
29	60.0	56 • 3	68.3	65 •8	67 • B	65 • 8	60.7	56•7	57.4
30	53.3	55 • 1	64 • 8	63•7	65 • 1	63.3	59.8	56+0	56 • 4
31	50.0	52.7	61 • 4	60 • 6	63 • 1	62 • 6	57.6	54 • 1	53.8
32	46.3	47 - 1	56 • 1	59•3	60∙8	60•0	56.0	52 • 5	51.6
33	45.0	46.0	54.5	56 • 6	58.0	57.7	54.8	51 • 3	50 • 3
34	45.0	45.8	51.7	57 • 1	58•3	56 • 5	50.6	47.6	45.6
35	45.0	45.0	47.8	52 • 8	52 • 3	50 • 6	45.9	45.0	45.0
36	45.0	45•¢	45 - 1	47.0	47.7	47.0	45.0	45.0	45.0
37	45.0	45.0	45.0	45.0	45 • 3	45 • 0	45.0	45.0	45.0
38	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0
39	45.0	45.0	45.0	45.0	45•0	45.0	45.9	45•0	45.0
40	45 · U	45 • O	45.0	45.0	45 • 1	45.0	45.0	45.0	45.0
Α	64.9	64.2	73.6	73.9	76 • U	74 • 4	63.7	66•3	65+3
D	69.3	69.5	76.9	78.4	80 • 3	79.4	73.9	71.0	69.7
OASPL	74.3	74.9	78.9	79.3	81.5	80 • 8	78.4	76.5	75 • 3
トソア	76.8	77 • 5	84.5	85.5	87•3	86 • 3	80.6	78.8	77 • 5
PNLT	78•3	77.5	84.5	ძ5•6	88•3	86•3	80•6	78 • 3	77•5

# TABLE . A-VIL

5 FOOT HOVER TEST

1/3 OCTAVE NOISE LEVEL FREQUENCY SPECTRA

HUGHES 300 C

OCTOBER 14 1976

EVENT 1. O DEGREES. MICROPHONE 150 METERS WEST

1/3 OCTAVE BAND VS LEVEL (AVE OVER 19 SECONDS)
(DB RE 20 MICRO P4)

	ENERGY			ARITH.	STD	
BAND	AVERAGE	MAX	MIN	AVERAGE	DEV	
						a= 10
14	58•9	61.5	55.2	58 • 6	1.8	270
15	55.5	59 • 1	51 • 6	55•0	5.0	
16	60 • 5	62.2	58 • 5	60 • 5	1 • 1	Microphone Location
17	58•5	60.7	56 • 4	58•3	1.3	1014 111 4
18	58 • 4	60.2	55•8	58•3	1 • 1	270° (Microphone Location Relative to Helicopter)
19	59.2	61.2	56 • 4	59.0	1 • 3	
20	72.7	73.8	71.5	72.7	•6	
21	59+0	60 • 9	57.4	58•9	• 7	
22	56+4	57.9	54.2	56 • 4	• 9	
23	64.3	66.2	61 • 1	64.1	1 • 3	
24	60 • 1	62.8	57 • 6	59.9	1.3	
25	62.9	65.4	59.6	62.6	1 • 6	
26	62.9	65.0	60 • 0	62.7	1 • 4	
27	62.5	64.7	60 • 1	62•3	1.2	÷.
28	61.5	64.2	58 • 8	61.3	1 • 3	
29	59.3	61.3	56.5	59.2	1.3	
30	56 • 6	58 • 6	53 • 7	56 • 4	1 • 4	`.
31	54 • 5	5 <b>7 •</b> 5	52.5	54+3	1.2	
32	53 • 3	57 • 8	50 • 3	52.9	´ • 8	
33	53 • 2	56•9	49.0	52.8	2.0	
34	50 • 0	54 • Q	46.0	49.4	2.2	
35	47 • 4	51 -8	45.0	46.9	1 • 8	
36	45 • 3	47.2	45.0	45.2	•6	
37	45.0	45 • 3	45.0	45.0	• 1	
38	45 • 0	45 • 0	45.0	45.0	• 0	
39	45 • 0	45.0	45.0	45.0	•0	
40	46 • 3	46 • 8	46.0	46.3	•2	
DBA	67 •৪	69.9	65.9	67.6	1.2	
DBD	72.7	75.2	70.9	72.6	1 - 1	
OASPL	75 • 6	76.7	74.3	75 • 6	•6	

PNL

PNLT

80 • 1

80 - 1

81.7

81.7

78.7

78.7

0.98

0.08

5 FOOT HOVER TEST

#### 1/3 OCTAVE NOISE LEVEL FREQUENCY SPECTRA

HUGHES 300 C

OCTOBER 14 1976

EVENT 2. 45 DEGREES. MICROPHONE 150 METERS WEST

1/3 OCTAVE BAND VS LEVEL (AVE OVER 19 SECONDS)
(DB RE 20 MICRO PA)

	STD	ARITH.			ENERGY	
225°	DEV	AVERAGE	MIN	MAX	AVERAGE	BAND
1 1	1 • 9	62.2	59 • 1	65•7	62 • 6	14
/ Microphane L	3 • 2	56 • 6	52.0	61.7	<b>57 • 7</b>	15
10111 -	1 • 4	59.2	57 • 1	61.7	59.4	16
Relative to 1	1.6	58.0	54 • 4	59.6	58•3	17
	1 • 5	56 • 8	54.3	59.5	57 • 0	18
	1 • 4	58 • 0	55 • 5	60.3	58 • 2	19
	1 • 6	72.5	69.7	75.2	72.8	20
	• 7	58 • 4	57 • 4	60.0	58 • 5	21
	1 • 5	56 • 1	53 • 1	58 • 6	56 • 4	22
	1.7	65.4	62 • 5	69.1	65∙8	23
	2.0	50.9	54.8	62.5	<b>59•</b> 3	24
	1 • 8	61.9	57 • 6	64.8	62.2	25
	2.3	60.9	57.2	64.3	61.5	26
	2 • 3	61.9	58 • 5	66.3	62.5	27
	2 • 5	61.0	57.3	65 • 6	61.7	28
	2.7	58 • 6	52 • 4	63 • 1	59.3	29
	3 • 4	57.2	50 • 6	62 • 1	58.3	30
	3.9	55 • 5	47.3	61.2	56•9	31
	4.5	53 • 9	45 • 6	61 • 1	55 • 8	32
	4 • 4	53 - 1	47 - 1	60.9	55 - 1	33
	4.3	50.9	45.2	58+4	52.9	34
	3.9	49.2	45.0	57.2	51 • 1	35
	2.5	46.7	45.0	52.9	47.6	36
	• 7	45 • 3	45.0	47.4	45 • 3	37
	•0	45.0	45.0	45.0	45.0	38
	•0	45.0	45.0	45.0	45 • 0	39
	•2	46.3	45.8	46.6	46 • 3	40
	2.7	67.5	63.7	72.4	68 • 3	DBA
	2.6	72.9	69 • 4	77.6	73.7	DBD
	1 • 3	75.6	74.0	77.4	75 . 8	OASPL
	2.2	80 • 2	77.0	84.3	80 • 7	PNL
				~	70 7	DAM T

80.2

2.2

PNLT

30.7

84.3 77.0

# TABLE A-III

5 FOOT HOVER TEST

1/3 OCTAVE NOISE LEVEL FREQUENCY SPECTRA

HUGHES 300 C

OCTOBER 14 1976

EVENT 3. 90 DEGREES. MICROPHONE 150 METERS WEST

:/3 OCTAVE BAND US LEVEL (AVE OVER 19 SECONDS) (DB RE 20 MICRO PA)

	ENERGY		MIN	ARITH.	STD DEV	180° (Microphono La Relative to Heli
BAND	AVERAGE	MAX	MIN	HATUHOD	221	180
1.0	65•7	69•3	59.7	65 • 1	2.4	/ Minnanhowa La
14 15	59.3	62.4	54.7	58.7	2 • 3	1111 at a prilation —
16	61 • 4	63-1	59.4	61 • 4	•9	Rolative to Heli
	63 - 5	66.7	58.2	63.0	2.2	Chemine in
17 18	64.2	69.6	58.5	62.8	3.2	
19	63 • 8	67.5	59.7	63.3	5-1	
20	74 • 9	76.3	73.0	74.8	• 9	
21	60 • 8	62.8	58.7	60 • 7	1 • 0	
	59.2	61.8	57.2	59.0	1 • 3	
22	69+2	71.5	66.6	69•0	1.5	
23	60 • 9	62.5	57.8	60.7	1 • 4	
24 25	64 + 8	67.8	60 - 7	64.5	1.8	
25 26	68 • 8	63.8	58.9	61 • 9	1.5	
20 27	61 + 9	64.2	57.3	61.6	1.9	
28	61 + 9	64.7	56.7	61-4	2 • 1	
29	59 • 8	63.4	55.2		1.9	
30	57 • 1	60 • 4	51.5		2.3	
	54 • 2	58 - 1	49.2		2 • 5	
31 32	53 • 0	57.2	46.7		3 • 3	
	51 • 7	55.3	46 • 5		3.0	
33	48 • 1	50 • 4	45 • 0		2.2	
34	46 • 0	47 - 1	45.0		1.2	
35	45 • 1	45.0	45 • 0	45•1	• 3	
36	45 • 0	45.0	45 • 0	45.0	•0	
37	45 • 0	45.0	45 - 0	_	•0	
38	45.0	45.0	45 • 0		•0	
39	46.4	46.8	46 - 1		•2	
40	68 • 4	70.2	65 • 0		1.6	
DBA	73 • 8	75.2	71 •		1.0	
DBU	77.8	78.4	76 •		•5	
ÇASPL	77.0	80.7	_		•7	

81.3

81.3

79.9

79.9

82.7

82.7

81.3

81.3

PNL

**PNLT** 

الرابع والمعاود والمراب والمعادات المتعاودات

PNL

PNLT

83 • 8

83 • 8

86.0

86.0

81 - 3

81.3

83.7

83.7

1.2

5 FOOT HOVER TEST

#### 1/3 OCTAVE NOISE LEVEL FREQUENCY SPECTRA

HUGHES 300 C

OCTOBER 14 1976

EVENT 4. 135 DEGREES, MICROPHONE 150 METERS WEST

1/3 OCTAVE BAND VS LEVEL (AVE OVER 19 SECONDS)
(DB RE 20 MICRO PA)

	ENERGY			ARITH.	STD	
BAND	AVERAGE	MAX	MIN	AVERAGE	DEV	135° (Microphone Location) Relative to Helicopter)
14	<del>6</del> 0 •5	64.0	55.9	59.7	2.6	7. 1 1 A. \
15	55 • 5	60.3	50 • 0	54.5	2.8	/ Microphone Location \
16	61.0	62.9	58.9	60 • 9	1 - 1	Cold to the Halm to
17	57 • 3	59.5	54.0		1.8	Melative to Melicopies
18	57 • 0	58 • 9	53 • 5		1.5	• • •
19	58 • 0	59.3	56 • 2	57.9	•9	
20	70 • 2	71.4	68 • 8	70 • 1	•8	
21	58 • 8	60.3	56 • 4	58.7	1 - 1	
22	57 • 1	58 • 6	55 • 1	56.9	1.2	
23	63 • 8	65.0	61.6	63.7	1-0	
24	61 • 5	64.4	59 • 1	61.3	1.5	
25	64 • 6	66•3	61 • 7	64 • 4	1.4	
26	65 • 9	67.8	63+0	65 • 8	1.2	
27	68 • 7	70.3	65.6	68-5	1 - 4	
28	69 • 7	72.5	65 • 6	69 • 4	1 • 6	
29	68 • 5	71.4	64 • 4	68 - 1	1.8	
30	64 • 5	67.8	59.9	64-1	8.0	
31	59 • 8	63.3	54.6	59.3	2.1	
32	56 • 6	61 • 1	49.7	55•7	3 • 1	
33	56 • 8	62.2	50 • 3	55.6	3.2	
34	53 • 9	59.5	46.9	52.7	3.3	
35	50 • ડે	56 • 1	45.0	49.2	2.9	
36	46 • 6	51.3	45.0	46.2	1 • 7	
37	45 • 2	46.2	45.0	45 • 2	•3	
38	45 • 0	45.0	45.0	45.0	۰٥	
39	45 • O	45.0	45.0	45.0	• C	
40	46 • 5	46 • 8	45.8	46 • 5	•3	
DBA	73.7	76.0	70.4	73 + 4	1.5	
DBD	76 • 7	79.1	74.0		1.2	
OASPL	77.5	79-1	75.6	77.4	•8	
C) 657	60.6	<i>a</i>				

5 FOOT HOVER TEST

#### 1/3 OCTAVE NOISE LEVEL FREQUENCY SPECTRA

HUGHES 300 C

OCTOBER 14 1976

EVENT 5. 180 DEGREES. MICROPHONE 150 METERS WEST

1/3 OCTAVE BAND VS LEVEL (AVE OVER 19 SECONDS)
(DB RE 20 MICRO PA)

	ENERGY			ARITH.	STD	
BAND	AVERAGE	MAX	MIN	AVERAGE	DEV	90° (Microphone Location Relative to Helicopter)
14	62+0	65 - 1	56+4	61.5	2.3	1 1. 4.
15	56.0	59 • 1	52 • 8	55•6	1 • 7	Microphone Wecelion
16	59.0	60+8	56 • 8	58.9	1 • 7 1 • 1	
17	57 • 4	8.09	54 • 6	57.2	1 • 4	Relative to Helicopter
18	57 + 9	61 • 0	55.6	57.7	1 • 4	(/,2/4///
19	56 • 9	57 • 8	55.7	56 • 8	•6	
20	67 • 0	68 • 0	65.9	66.9	•6	
51	57 • 3	59.7	55.0	57.2	1 - 1	
55	56 • 6	58.7	54.4	56 • 5	1.3	
23	61 • 8	64.7	58 • 8	61.5	1 • 8	
24	6C • O	64 • 6	56.9	59.5	2.1	
25	62 • 9	68 • 3	59.0	62.1	2.5	
86	63 • 1	67.5	59.9	62-6	1 - 9	
27	64 • 6	67 • 7	62.4	64 • 4	1.5	
28	65 • 5	68.2	63.0	65 • 3	1.2	
29	64 • 4	69.0	60 • 1	63.9	2.0	
30	62 • 2	66 • 6	57 • 8	61 • 4	2.6	
31	59 • 3	64-4	54.0	56 • 4	2.7	
32	55 • 8	60 - 6	48.8	54.9	2.8	
33	55 • 4	61 • 4	49.0	54.4	2.8	
34	52 • 2	59 • 3	46-1	50 • 7	3 • 3	
35	48 • 5	55 • 1	45.0	47 • 3	2.8	
36	45 • 8	50 • 2	45.0	45 • 5	1 - 4	
37	45 • 1	45.9	0 و ذ	45 • 1	•2	
38	45 • 0	45.0	45.0	45.0	•0	
39	45 • 0	45.0	45.0	45.0	• Q	
40	46 • 5	46.8	46 • 1	46.5	•2	
DBA	70 • 6	74.3	67.5		1 • 8	
DBD	74 • 1	77.7	71.2		1 . 8	
OASPL	74.9	77.4	73.0		1.2	

PNL

PNLT

81 - 2

81 -2

84.4

84.4

78.7

78.7

80.9

81.0

1.5

1 • 5

# TABLE A-VIII 5 FOOT HOVER TEST

Committee and a section of the control of the contr

1/3 OCTAVE NOISE LEVEL FREQUENCY SPECTRA

HUGHES 300 C

**OCTOBER 14 1976** 

EVENT 6. 225 DEGREES. MICROPHONE 150 METERS WEST

1/3 OCTAVE BAND VS LEVEL (AVE OVER 19 SECONDS)
(DB RE 20 MICRO PA)

	ENERGY			ARITH.	STD
BAND	AVERAGE	MAX	MIN	AVERAGE	DEV
4 4					
14	64 • 1	67 • 1	61.0	63∙8	1 • 8
15	60 • 7	65 • 1	<b>53.7</b>	60.2	2.2
16	63 • 9	66 • 7	60•8	63•6	1.7
17	63 • 6	68.2	60•6	63•3	1.8
18	63.6	68•0	60 • 3	63.2	1 • 8
19	59 • 4	62.7	56 • 5	59•0	1.7
20	68•7	70.2	62.9	68•5	1.3
21	56 • 5	58•2	54.2	56 • 4	1.0
22	55 • 2	58 • 1	53 • 1	55.0	1 • 4
23	63 • 4	65•7	60.0	63.1	1.5
24	57 • 2	58•6	54.7	57 • 1	1.0
25	59 • 0	61.6	55•4	58 • 7	1.7
26	57 • 4	58 <b>-6</b>	54.4	57•3	1.0
27	56 • 8	58•5	53.4	56.7	1.2
28	55 • 9	58•7	50.9	55 • 5	2+0
29	53 • 6	57 • 9	48 • 1	53.0	2.3
30	51 • 2	55•8	48.0	50 • 6	2 , 1
31	48 • 3	52 • 1	45.1	47.9	1.9
32	46 • 1	49.2	45.0	45.9	1.2
33	45 • 6	48 • 6	45.0	45.5	• 9
34	45.0	45 • 1	45.0	45.0	•0
35	45.0	45.0	45.0	45.0	•0
36	45.0	45.0	45.0	45.0	•0
37	45 • 0	45.0	45.0	45.0	•0
38	45.0	45.0	45.0	45.0	•0
39	45 • 0	45.0	45.0	45.0	•0
40	46 • 6	47.0	46.1	46.6	•2
DBA	62 • 4	64.9	59.7	62.2	1.3
DBD	68 • 5	70 • 1	66.7	68 • 4	•9
OASPL	74.2	75.9	72.6	74 • 1	•9
PNL	76 • 4	77.7	74.8	76.3	•7
PNLT	76 -4	77.7	74.8	76.3	• 7
_		. ,	4 -4 - 12	, , , ,	• 1

45°
(Microphone Location)
Relative to Helicopter)

5 FOOT HOVER TEST

1/3 OCTAVE NOISE LEVEL FREQUENCY SPECTRA

HUGHES 300 C

**OCTOBER 14 1976** 

EVENT 7. 270 DEGREES. MICROPHONE 150 METERS WEST

1/3 OCTAVE BAND VS LEVEL (AVE OVER 19 SECONDS)
(DB RE 20 MICRO PA)

	ENERGY			ARITH.	STD		
BAND	AVERAGE	MAX	MIN	AVERAGE	DEV	مد	
	**********	- 23 - 72	••••			$\mathcal{O}$	
14	65+2	72.2	61 • 4	64.4	2 • 4	Microphone Relative to	1 another
15	61 • 5	70.3	54.2	59.6	3 • 6	Microphone	MOGALION /
16	61.5	68.2	57 • 7	60.7	2.2	Colotina to	Heliantes
17	60 • 3	64.5	56 • 5	59.7	2 • 2	REBLIVE 18	TETTERPTET
18	58 • 1	63.0	55 • 3	57.7	1 - 8		,
19	57 • 3	59 • 6	54.4	57.1	1.5		
20	71.8	73.2	70 - 1	71.8	•8		
21	55•2	56.2	53 • 5		• 7		
22	53 • 4	55 • <b>5</b>	50.9		1 • 4		
23	67 • 1	68 • 2	64.6	66 • 9	1 - 1		
24	56 • 0	58 • 7	53 • 1	55•8	1 + 6		
25	61.2	63.5	58 • 1	60 · B	1 - 8		
26	56•7	60 • 1		36 • 1	2.2		
27	54 +8	59.9			3 • 1		
28	52.7	59.5	45.4		4.0		
29	50 • 7	57.9	45.0		4 - 1		
30	49.2	56 • 4	45.0		3 • 5		
31	47 • 7	54.4	45.0		2.7		
32	46 - 1	51.3	45.0	45 • 7	1 • 7		
33	46 • 0	50 • 7	45.0	45 • 7	1 - 5		
34	45 - 4	47.8	45.0	45+3	• 7		
35	45.0	45.5	45.0	45.0	• 1		
36	45.0	45.0	45.0	45.0	• 0		
37	45 • 0	45.0	45.0		•0		
38	45.0	45.0	45.0	45.0	• C		
39	45.0	45.0	45.0	45.0	•0		
40	46 • 6	46.9	46 - 3	46 • 6	•2		
DBA	62 • 4	66 • 4	59.3	61.9	1.9		
DBD	69.5	71.4	67.9		1.0		
OASPL	74.8	77.3	73.7	74.7	•8		
PNL	77 • 3	79.2	75.7	77.2	• ១		
13.417.05		5.0.0					

77.2

79.2

75 • 7

PNLT

77 • 3

### TABLE A-DIT

5 FOOT HOVER TEST

#### 1/3 OCTAVE NOISE LEVEL FREQUENCY SPECTRA

HUGHES 300 C

OCTOBER 14 1976

EVENT 8, 315 DEGREES, MICROPHONE 150 METERS WEST

1/3 OCTAVE BAND VS LEVEL (AVE OVER 19 SECONDS)
(DB RE 20 MICRO PA)

BAND	ENERGY AVERAGE	MAX	MIN	ARITH. AVERAGE	STD DEV
14 15	69•3 66•8	75•4 70•3	62 • 2 55 • 1	68•5 64•9	3•6 5•0
16	63 -8	67.5	56.5	62.9	2.9
17	61 • 7	65.6	58 • 8	61 • 4	1.6
18	59 • 0	61.6	53.3	58 • 5	2.3
19	58 • 2	60 • 8	54.1	57.8	1.9
20	69 • 5	71 • 4	65.7	69•3	1.2
21	54.0	55•4	52.0	53.9	•8
22	51 • 8	53•7	50 • 1	51 ~ 7	1 - 1
23	62 • 1	65.2	56.9	61.6	2.1
24	52 • 8	55•3	49.8	52 • 4	1.7
25	55 • 9	59 • 3	50 • 4	55•2	2.6
26	51 • 6	54-1	48.2	51 • 3	1.8
27	49•8	51.9	45.4	49.5	i • 7
28	49 • 2	52.0	46 - 1	49.0	1 - 4
29	47 • 1	49 • 7	45.0	47.0	1.2
30	46 • 7	49 • 1	<b>45•</b> 0	46•6	1.2
31	46 • 4	48 • 4	45.0	46.3	1 - 1
32	45 • 8	49.2	45.0	45.7	1 • 1
33	46 • 2	51 • 4	45.0	45 • 8	1 • 6
34	45 • 2	47.1	45.0	45.2	• 6
35	45 • 0	45 - 4	45.0	45 • 0	• 1
36	45.0	45.0	45.0	45 • 0	•0
37	45 • 0	45.0	45.0	45 • 0	•0
38	45 • 0	45 • 0	45.0	45-0	•0
39	45 • 0	45 • 0	45.0	45 • 0	•0
40	46 • 4	46.9	45.3	46+3	• 4
DBA	58 • 8	60 • 5	56•5	58•6	1.0
DBD	66 • 8	68 • 1	65 • 6	66.7	• 7
OASPL	74 • 6	76 • 8	71.8	74.3	1 • 5
PNL	75 • 0	75.7	74.0	<b>75•</b> 0	+5
PNLT	75 • 1	76.7	74.0	75.0	• 6

315°
(Microphone Location)
Relative to Helicopter)

5 FOOT HOVER TEST

#### 1/3 OCTAVE NOISE LEVEL FREQUENCY SPECTRA

HUGHES 300 C

OCTOBER 14 1976

#### EVENT 1, O DEGREES, MICROPHONE 150 METERS EAST

# 1/3 OCTAVE BAND VS LEVEL (AVE OVER 19 SECONDS) (DB RE 20 MICRO PA)

	STD	ARITH.			ENERGY	
90° (Microphone Lo Relative to He	DEV	AVERAGE	MIN	MAX	AVERAGE	BAND
1 sammalana la	3 • 7	65.2	59 • 8	75.5	67 • 4	14
/ ////CTOPHONE CO	6 • 1	57.7	52.8	75.3	64.8	15
$(\rho_m) + \dots + \mu_n$	4.3	61.2	56 • 5	74.7	65 • 0	16
Melalive 10 h	4.5	58 • <b>7</b>	54 • 7	72.6	62.8	17
	4.6	57.8	52.7	72.0	62 • 1	18
	3 • 5	59.9	56.5	71.2	62.3	19
	1 • 4	69.9	66 • 8	72.2	70.2	20
	3.3	58.8	54.6	68 • 1	60 • 5	21
	2.5	60.9	57.2	67.6	61.8	22
	2.4	66.2	61.2	70.2	66 • 7	23
	1.9	64.9	60 • 5	68.3	65+3	24
	2.1	66.3	62 • 1	69.6	66.8	25
	1.9	68.9	64-4	73.3	69.3	26
	2.0	68•6	61 • 4	72.1	69.0	27
	2.1	66•6	59•9	70 - 1	67.0	28
	2.1	63.0	56.9	66 • 4	63.5	29
	3.0	57.8	52 • 1	63.8	58.9	30
	3 • 4	56.1	52.6	63.1	57 • 6	31
	2.4	57.4	54 <b>•7</b>	64.3	58 • 1	32
	S • S	58.2	54.6	63.9	58 • 8	33
	S•0	56.6	52.9	61.5	57 • 1	34
	2.2	51.9	48.7	56.5	52.5	35
	3.0	48.3	45.0	57 • 4	49.8	36
	1 • 3	45.5	45.0	50.2	45.8	3 <b>7</b>
	2.2	45.7	45.0	53.5	46 • 6	38
	1.5	45.5	45.0	51.0	45.9	39
	• 2	45.1	45.0	45.7	45 - 1	40
	1.7	72 • 1	67.2	75.3	72.4	DBA
	1 • 4	76•6	73.9	80.3	76 - 8	DBD
	1 • 8	78.0	76-1	83.2	78.5	OASPL
	1 • 4	84.0	81.8	87.0	84.2	PNL

81.8

88.0

PNLT

84.5

84.2

1 • 5

5 FOOT HOVER TEST

#### 1/3 OCTAVE NOISE LEVEL FREQUENCY SPECTRA

HUGHES 300 C

**OCTOBER 14 1976** 

#### EVENT 2: 45 DEGREES: MICROPHONE 150 METERS EAST

# 1/3 OCTAVE BAND VS LEVEL (AVE OVER 19 SECONDS) (DB RE 20 MICRO PA)

BAND	ENERGY AVERAGE	MAX	MIN	ARITH. AVERAGE	STD DEV
14	69•3	72.2	66-1	69•0	1 • 6
15	63 • 8	68.7	52.6	62.1	4.4
16	63•6	69 • 1	59.3	62.9	2.3
17	61.7	63 • 2	59.2	61.5	1.3
18	58 • 7	61.9	55.2	58.3	1.7
19	58 • 6	59 • 8	56,7	58•6	.9
20	70•9	72.8	67 • 8	<b>7</b> 0∙8	1.0
21	60 • 9	62.9	57.6	60.6	1+6
22	€1 • 7	64.5	59.4	61.5	1 • 4
23	70 - 1	72 • 1	67 • 0	69.9	1.3
24	66 • 0	69 • 4	63-1	65•8	1.5
25	70.3	73.4	65 • 4	69•6	2.6
26	71.2	73•7	66.7	70 <b>-</b> 8	2.1
27	68•9	71.8	65•0	68•6	1.6
28	66 • 5	69 • 1	63.5	66.3	1.5
59	62•6	65 • 6	59•1	62.3	1 • 6
30	63 • 1	67.0	54•9	61 • 6	3.8
31	65 • 3	69•7	54.8	63.5	4.3
32	65•9	70 • 4	56.0	64.7	3.6
<b>3</b> 3	63 • 3	66•3	55+6	62.5	3.0
34	60 • 0	63 • 0	54 • 1	59•4	2.5
35	55 • 4	59 • 2	49.7	54.7	2.6
36	49 • 8	52.0	45.5	49.4	5.5
37	45 • 3	46 • 3	45•0	45•3	• 4
38	45 • 0	45.0	45.0	45.0	•0
39	45.0	45.0	45.0	45.0	• Q
40	45 • 0	45 0	45+0	45.0	•0
DBA	74 • 8	77 • 5	70•0	74.3	2•2
DBD	79 • 6	82.5	75.0	79 • 1	2.2
OASPL	79.9	81 • 9	77 • 7	79.8	1 - 1
PNL	86 • 6	89 • 4	82.3	86•2	2.1
PNLT	86•6	89 • 4	82•3	86•2	2 • 1

Microphone Location
Relative to Helicopter

5 FOOT HOVER TEST

1/3 OCTAVE NOISE LEVEL FREQUENCY SPECTRA

HUGHES 300 C

**OCTOBER 14 1976** 

EVENT 3, 90 DEGREES, MICROPHONE 150 METERS EAST

1/3 OCTAVE BAND VS LEVEL (AVE OVER 19 SECONDS) (DB RE 20 MICRO PA)

	ENERGY			ARITH.	STD	
BAND	AVERAGE	MAX	MIN	AVERAGE	DEV	
	•	• • • • •			•	
14	68•9	75.4	63 • 3	66•9	3.7	(Microphove L Relative to A
15	65 • 1	73.3	49.8	56+9	7.2	_
16	65 • 5	73.3	55 • 5	60 - 6	5.5	CALLED Shows /
17	65 • 3	72.9	57.3	61.7	4.7	באיטויק פייטווין ן
18	63 • 4	71.3	53 • 2	58 • 4	5 • 5	Palatus to 1
19	63•9	71.3	55 • 6	60.0	4.9	CLEIGING 10 1
20	74 • 1	77.3	72.3	73.9	1.2	
21	62 • 2	68.9	55.0	59+2	4.3	
22	60 • 9	68.1	54.4	57.8	4.3	
23	69:9	73.5	67 • 2	69•6	1 • 4	
24	62 • 7	67.6	59•7	61 • 9	2-4	
25	67 • 1	71.9	64.0	66•6	1.9	
26	66 • 2	70.0	53 • 6	65•9	1 • 6	
27	63 • 4	66•7	61.2	63•1	1 - 4	
28	61 • 1)	64-3	57.1	60 • 6	2.0	
29	57 • 4	62.5	50 • 9	56 • 1	3 • 3	
30	55 • 1	59•9	47.4	53•2	4.2	
31	56•9	62 • 4	49.4	55•0	4.0	
32	58•8	63.4	53 09	57-7	3.0	
33	58 • 5	62.4	54•5	58•0	2 • 1	
34	55•0	59•7	49.7	54•5	2 • 1	
35	51 • 6	58.0	45.3	49 • 7	4.0	
36	49.6	57.0	45.0	47.3	3 • 7	
3 <b>7</b>	46 • 8	53.6	45,0	45.9	2.3	
38	47.5	55.2	45.0	45•9	2.7	
39	46 • 4	52.7	45.0		2.1	
40	47 • 6	55.7	45.0	45•9	2,9	
DBA	69 • 5	72-1	67•6		1 • 4	
DBD	<b>75 •</b> 3	78.0	73.9		1 • 2	
OASPL	78 • 8	84.0	76.3	78•0	2•3	
PNL	82 • 9	87.0	80•3	82 • 4	2.0	
PNLT	83 • 4	88•7	80•3	82 • 7	2.3	

5 FOOT HOVER TEST

1/3 OCTAVE NOISE LEVEL FREQUENCY SPECTRA

HUGHES 300 C

OCTOBER 14 1976

EVENT 4. 135 DEGREES. MICROPHONE 150 METERS EAST

1/3 OCTAVE BAND VS LEVEL (AVE OVER 19 SECONDS)
(DB RE 20 MICRO PA)

	ENERGY			ARITH.	STD	
BAND	AVERAGE	MAX	MIN	AVERAGE	DEV	- · · · •
						315° (Microphone Los Relative to Heli
14	65•3	68•2	59•8	64.2	2.9	
15	<b>6</b> 0 + 9	67-1	53∙6	59•3	3 - 7	Microphone Los
16	62 • 2	64-1	59•3	61.9	1.7	( ) netoprione Zao
17	58•6	60•9	55 • 1	58•2	1.9	Relative to Hol
18	55.9	57.5	52.9	55 <b>•7</b>	1.2	resulte to hell
19	61 • 1	62.7	58 • 7	61.0	1 - 1	
20	75•9	76.8	74.7	75.8	•6	
21	58•0	60 • 1	55 • 5	57.8	1.3	
22	57.5	59.5	53.8	57.3	1 - 4	
23	67 • 7	69.5	65.0	67.6	1.0	
24	61.7	62.9	59.3	61 • 6	•9	
25	65 • 6	67.3	62.5	65.4	1 - 2	
26	64.9	68.5	61.8	64.6	1-6	
27	65•i	67 • 3	61.2	64.9	1 - 4	
28	63 • 6	66.3	58•7	63 • 2	2.8	
29	57.9	60.3	55 • 1	57-6	1 + 5	
30	56•0	58 • 5	52.3	55.5	2.0	
31	57.7	60.7	52.5	57 • 1	2.4	
32	59.9	64.0	55 • 4	59+3	2.4	
33	60.0	64.2	53.9	59-3	2.7	
34	57.2	62 • 1	51.7	56.3	2.9	
35	53 • 0	58•5	49.1	52.3	2.3	
36	49.9	53 • 4	46 • 4	49.4	2•0	
37	45.2	46.8	45.0	45.2	-4	
38	45.0	45.0	45.0	45.0	•0	
39	45.0	45.0	45.0	45.0	•Q	
40	45.0	45.0	45.0	45.0	•0	
DBA	70 • 6	73.2	68.0	70.3	1.5	
DBD	76.6	79.7	74.3	76 • 4	1.4	
OASPL	78 • 4	79.4	77.1	78-3	•6	
PNL	83 • 4	86.0	81 • 4		1.2	
PNLT	83.5	86.0	81 - 4	83 • 3	1.2	

## TROLE A- VIL

5 FOOT HOVER TEST

1/3 OCTAVE NOISE LEVEL FREQUENCY SPECTRA

HUGHES 300 C

OCTOBER 14 1976

EVENT 5, 180 DEGREES, MICROPHONE 150 METERS EAST

1/3 OCTAVE BAND VS LEVEL (AVE OVER 19 SECONDS)
(DB RE 20 MICRO PA)

	ENERGY			ARITH.	STD
BAND	AVERAGE	MAX	MIN	AVERAGE	DEV
14	66•3	69-3	59 • 1	65•8	2.3
15	61.5	66.0	54-6	60 - 4	3.4
16	62.0	63.3	60.0	61.9	•9
17	61 • 5	63.8	56 • 8	61 - 1	2.0
18	56.9	58.8	54.2	56 • 7	1.4
19	59+0	61.6	57 • 4	58.9	4
20	75 • 4	76.3	74.0	75•3	•6
21	61.3	62.9	59.9	61.3	• 7
82	59 • 6	61.3	58 • 5	<b>59 •</b> 5	• 7
23	68 • 4	70 • 4	66.7	68.2	1.0
24	63.9	65 • 6	61 • 1	63•6	1.3
25	69.0	71.3	65.5	68.7	1.7
26	70 • 4	75.1	66 • 5	69•7	2.3
27	68 • 7	72.9	65 • 4	66.3	1.8
28	66 • 1	67.5	63 • 6	66.0	1.0
29	61 • 4	63.0	58•3	61.2	1.5
30	62 • 1	66•6	56 • 3	61.4	2.4
31	64.2	68.9	58 • 5	63.5	2.5
32	66 • 6	72.9	62 • 5	65.7	2.5
33	64 • 4	68 • 1	60 • 8	63.9	1.9
34	61.9	65•3	58 • 9	61.5	1.7
35	57.0	60.8	53 • 8	56•6	1.7
36	53 • 0	57•9	50 • 3	52•6	1.9
37	47 • 1	50.9	45 • 1	46 • 8	1.6
38	45 • 0	45 • 1	45 • 0	45 • 0	•0
39	45 • 0	45.0	45 • 0	45.0	•0
40	45 • 0	45.0	45 • 0	45.0	•0
DBA	74 • 8	78 • 4	72.3	74.5	1.5
DBD	80 • 1	83 • 3	78 • 2	79.9	1 - 3
OASPL	79.7	81 • 1	78 • 4	•	•8
PNL	87 - 1	90+6	84.8	86 • 8	1.5
PNLT	87.5	92 • 1	84.8	87.1	1 • 8

270° (Microphone Location Relative to Helicopter)

## TABLE A-DIL

5 FOOT HOVER TEST

1/3 OCTAVE NOISE LEVEL FREQUENCY SPECTRA

HUGHES 300 C

OCTOBER 14 1976

EVENT 6, 225 DEGREES, MICROPHONE 150 METERS EAST

1/3 OCTAVE BAND VS LEVEL (AVE OVER 19 SECONDS) (DB RE 20 MICRO PA)

	ENERGY			ARITH.	STD
BAND	AVERAGE	MAX	MIN	AVERAGE	DEV
14	66 • 6	68•6	63.9	66.5	1 - 1
15	61.3	64+0	56•6	60-9	2+0
16	63.9	67.0	59•3	63•5	1 • 8
17	62 • 5	65•3	60 • 5	62 - 3	1.3
18	62 • 5	67 • 4	5 <b>7 •</b> 5	61-6	2.6
19	63 • 4	66 • 4	61 • 3	63.2	1.3
20	76 • 1	77 • 4	74-1	76 • 1	•9
21	62.6	63.8	61.3	62.5	- 8
22	59•9	62•3	57•7	59•7	1.3
23	69.0	72.2	65 • 1	68 • 7	1 • 4
24	65 • 1	66.5	62.7	65.0	•8
25	71.3	73 • 8	67.9	71.0	1.6
26	71 • 6	72.7	69.6	71 • 5	1.0
27	71 +5	73 - 3	69 - 4	71.5	• 9
28	71.0	72.9	68.9	70 • B	1 - 1
89	65 • 9	68•7	63.3	65•6	1.5
30	62.9	66.2	58 • 1	62.2	2.5
31	64 • 1	67 • 4	54.8	62.9	3 • 6
32	67 • 4	71.0	59 • 8	66 • 1	3.5
33	66 • 6	70.0	60.2	65•7	2.9
34	64 • 6	67.9	59.6	64.0	2.5
35	59•7	63.0	53.7	59 - 1	2.6
36	55 • 4	59•3	50 • 1	54.6	8 • 6
37	48.3	52 • 1	45.0	47.9	1.8
38	45.2	46.0	45.0	45.2	•3
39	45.0	45.0	45.0	45.0	•0
40	45 • 0	45.0	45.0	45.0	+0
DBA	76•9	79•0	73.4	76•6	1.6
DBD	82•2	84.4	79.1	81.9	1.6
OASPL	81 • 3	62 • 6	79.6	81.2	• 7
PNL	89•0	91.2	85.5	88•7	1 • 7
PNLT	89•0	91.2	85.5	88.7	1 • 7

225°
(Microphone Location)
(Relative to Helicopter)

5 FOOT HOVER TEST

1/3 OCTAVE NOISE LEVEL FREQUENCY SPECTRA

HUGHES 300 C

OCTOBER 14 1976

EVENT 7. 270 DEGREES. MICROPHONE 150 METERS EAST

1/3 OCTAVE BAND VS LEVEL (AVE OVER 19 SECONDS)
(DB RE 20 MICRO PA)

		STD	ARITH.			ENERGY	
		DEV	AVERAGE	MIN	MAX	AVERAGE	BAND
,0	/80° (Microphone Relative to	2.2	65.7	61.9	69.1	66.2	14
	, , , ,	1 • 4	54.5	51 • 1	56.5	54.8	15
זממאל	/ Minney hone	1.3	58.7	56.7	60.8	58 - 8	16
	Triserophone	1.7	60.0	57 • 1	62.7	60 • 3	17
= Helic	Palative to	1 • 1	56.6	55.0	58.3	56 • 7	18
0 1/01/0	Welalive 10	• 7	59 • 1	57.8	60.3	59 • 1	19
	•	•2	74.3	73.9	74.6	74.3	20
		•5	58 • 8	58 • 1	59 • 8	58 • 8	21
		1.3	55.7	52.8	58.Q	55•9	22
		1.6	67-1	65.0	70.0	67 • 4	23
		2.0	60.0	56.9	64.3	60 • 5	24
		1.9	63.2	60 • 2	66 • 3	63•6	25
		2.3	62.6	57 • 9	65.8	63 • 2	26
		2.0	61.9	57 • 7		62 • 3	27
		1.8	60•3	56.8		60 • 7	28
		1 • 8	55.7	52 • 4	59.2		29
		2.0	51.6	48.2	53.6	52 • 2	30
		3.0	51.3	46.9	53 • 6	52 • 8	31
		3 • 1	53.3		55+8	54 • 6	32
		2.8	54.7	49.5	58.2	55•6	33
		2.8	54.5	49.0	58 • 6	55 • 4	34
		2.5	49.2	45.2	54.6	49.9	35
		1 • 1	46 • 1	45 • 0	49.0	46•3	36
		•2	45 • 1	45.0	45.7	45 • 1	37
		•0	45.0	45 • 0	45+0	<b>45 •</b> 0	38
		•0	45.0	45.0	45.0	<b>45 •</b> 0	39
		•0	45.0	45 • 0	45.0	45 • 0	40
		1 - 7	67 • 3	63•8	69•5	67 • 6	DBA
		1 - 4	73.5	70 • 6	75•4	73 • 7	DBD
		• 6	76-8	75.8	77 • 8	<b>76 •</b> 8	OASPI.
		1 • 1	81.0	79.0	84 • 1	81 +2	PNL
		1.5	81 • 5	79.0	84.1	81 +8	PNLT

5 FOOT HOVER TEST

1/3 OCTAVE NOISE LEVEL FREQUENCY SPECTRA

HUGHES 300 C

OCTOBER 14 1976

EVENT 8, 315 DEGREES, MICROPHONE 150 METERS EAST

1/3 OCTAVE BAND VS LEVEL (AVE OVER 19 SECONDS)
(DB RE 20 MICRO PA)

	ENERGY			ARITH.	STD	
BAND	AVERAGE	MAX	NIM	AVERAGE	DEV	135° (Microphone Location Relative to Helicopte
14	67 - 4	71 - 6	64+0	67.0	1 • 6	(Missashus I senti
15	63.3	66•6	56.0	62.5	2.7	MICROPHONE GOCATION
16	61.5	63+5	56 • 3	61.2	1 • 7	Rolation + U-limit
17	59 • 1	61.8	57.3	59.0	1 - 1	KEINTIVE 10 METICOPIE
18	55 • 5	57.8	53.5	55+3	1.2	
19	59.0	60.9	56.8	58.9	1 - 1	
20	72.1	73.2	70.6	72 • 1	•8	
21	59.9	61.5	57.9	59.9	• 7	
22	60.3	64.2	55 9	59.6	2.4	
23	68.9		66.0	68.7	1.0	
24	64.7	68.7	62 • 1	64.2	2.0	
25	67.8	70.3	65.8	67.6	1.2	
26	69.6	72.4	67.0	69.3	1.4	
27	68 • 4	71.1	66 • 1	68.2	1 • 4	
28	65.7	68.7	62.7	65 • 4	1.5	
29	59.8	64.5	56.0	59 2	2.1	
30	56 • 1	59.5	52.6	55.7	1.9	
31	58.3	62.9	51.8	57.5	2.7	
32	60 • 3	64.2	53 • 0	59.6	2.7	
33	59°7	62.0	55 • 4	59.3	2.0	
34	57.3	60.5	52.4	56.8		
35	52.5	55+6	48 8	52 • 1	2-1	
36	47 • 8	51.8	45.2		1.9	
37	45.0	45.5	45.0	47.4	1 • 6	
38	45.0	45.0		45-0	•1	
39	45.0	45.0	45 0	45 • 0	•0	
40	45.0		45 • 0	45-0	•0	
DBA		45.0	45.0	45.0	•0	
DBD	72.2	74.6	70.2	72 • 1	1.2	
OASPL	77 • 2	79.0	75.6	77-0	1.0	
	78 • 4	79.7	77.2	78.3	• 7	
PNL	84.3	86.5	82.7	84 • 1	<b>1</b> • O	

1.0

84-1

PNLT

84.3

86.3

82.7

500 FOOT HOVER TEST

#### 1/3 OCTAVE NOISE LEVEL FREQUENCY SPECTRA

HUGHES 300 C

**OCTOBER 14 1976** 

EVENT 41, O DEGREES, MICROPHONE 150 METERS WEST

1/3 OCTAVE BAND VS LEVEL (AVE OVER 19 SECONDS)
(DB RE 20 MICRO PA)

_	ENERGY			ARITH.	STD	
BAND	AVERAGE	MAX	MIN	AVERAGE	DEV	270° (Microphone Location) Relative to Helicopter)
14	74.3	78.2	58.9	73.0	4.0	( some hour location)
15	74-1	79.5	64.4	72.8	3.6	Michobusho Possivok
16	71.5	76.1	60.7	70.3	3.7	Polotin + Unlimite
17	67.3	72.1	54.2	65•6	4.6	relative to helicopier
18	66 • 6	70.9	55.0	65 • 1	4.2	•
19	61-1	65.2	50.9	60 • 1	3.2	
20	<b>59•</b> 1	62.5	47.7	58.0	3 • 8	
21	57.2	61.5	46.5	55.9	3 • 8	
22	58 • 4	60 • 4	56.2	58.3	1 - 1	
23	64.8	66 • 6	61.9	64.6	1.2	
24	58.3	61.6	54.7	58.0	1.6	
25	56.3	58 • 8	53 • 8	56 • 1	1.3	
26	62 • 8	66 • 1	57.3	62 • 4	2.0	
27	60.0	63.1	55 • 1	59 • 6	1.8	
28	64.1	67.2	60.0	63.7	1.9	
29	62.7	65•6	58.3	62 • 4	1 • 7	
30	61.0	63.3	57.8	60 • 8	1.5	
31	59.0	61 • 4	56.6	58 • 8	1.3	
32	56.6	59 • 1	52.9	56+3	1.5	
33	54.3	56•3	51 • 1	54 • 1	1.4	
34	50 • 4	52 • 5	47.6	50 • 2	1.3	
35	46 • 1	47 • 6	45.0	46.0	•8	
36	45 • 0	45.0	45.0	45.0	•0	
37	45.0	45.0	45.0	45+0	•0	
38	45 - 0	45.0	45.0	45.0	•0	
39	45 • 0	45 • 1	45.0	45.0	•0	•
40	47.3	47.7	46.8	47.3	• 2	
DBA	69 • 1	71.6	65.2	68.8	1.5	
DBD	73.0	75.2	69.5	72.8	1.3	
OASPL	79 • 6	82.9	74.6	79.2	1.9	
PNL	80 +2	82.5	77.0	80.0	1.2	
PNLT	80 • 5	83 • 2	77.9	80.3	1 • 4	

95

### TABLE A-III

500 FOOT HOVER TEST

1/3 OCTAVE NOISE LEVEL FREQUENCY SPECTRA

HUGHES 300 C

OCTOBER 14 1976

EVENT 41, O DEGREES, MICROPHONE 150 METERS EAST

1/3 OCTAVE BAND VS LEVEL (AVE OVER 19 SECONDS) (DB RE 20 MICRO PA)

	ENERGY			ARITH.	STD
BAND	AVERAGE	MAX	MIN	AVERAGE	DEV
14	72•6	76•3	62.3	71 7	2.0
15	69 • 4	74 • 1	57.1	71.7	3 • 2
16	69.5	73.9	60.7	67•9 68•4	4•2 3•4
17	63 • 8	67 • 1	53.1	62.5	-
13	61 • 2	63.7	55.6	60.7	3 • 8
19	56 • 1	58 • <b>7</b>	50.7		2•2
20	54 • 3	57 • O	50 • 4	55•6 53•9	2.0
21	55 • 0	57 • 2	51.5		2•0
22	58 •8	61 • 1		54.8	1 • 4
23	_		55 • 8	58 • 6	1 • 4
24 24	65 • 1	68.0	60 • 3	64.7	2.0
24 25	56 • 9 58 • 0	60.2	52.3	56.4	2.1
25 26		61.8	54.5	57.5	1.9
	64 • 1	67.9	61.2	63.7	1.9
27	60 • 1	63 • 4	57.0	59.7	1 • 8
28	62 • 8	66 • 7	58+0	62.2	2 • 1
29	63 • 1	66.9	59.7	62 • 7	1 • 6
30	62 • 4	65.5	60.2	62.2	1.2
31	60 • 4	63 • 5	57.9	60+2	1.3
32	56 • 4	58.7	54 • 4	56 • 2	1 • 2
33	53 + 6	56.0	51 • 4	53.5	1 • 0
34	50 • 4	52 • 6	47.7	<b>50 •</b> 3	1 • 1
35	45 • 7	47.0	45.0	45•7	• 6
36	45 • 0	45.0	45 • 0	45.0	• 0
37	45 • 0	45.0	45.0	45•0	• 0
38	45 • 0	45.0	45.0	45•0	•0
39	45 • 0	45 • 0	45.0	45.0	•0
40	45 • 0	45.0	45.0	45.0	• 0
DBA	69 • 2	72.3	66.9	69•0	1 • 3
DBD	72 • 5	75 • 1	70.3	72.4	1.2
OASPL.	77•9	80.5	72.4	77.5	2.0
PNL	79•9	82.5	78.0	79•8	1 • 1
PNLT	79•9	82.5	78.0	79.8	1 • 1

90°
(Microphone Location
Relative to Helicopter)

### TABLE A- III

500 FOOT HOVER TEST

#### 1/3 OCTAVE NOISE LEVEL FREQUENCY SPECTRA

HUGHES 300 C

OCTOBER 14 1976

EVENT 41, O DEGREES, CENTERLINE MICROPHONE ( SOFT SITE )

1/3 OCTAVE BAND US LEVEL (AVE OVER 19 SECONDS)
(DB RE 20 MICRO PA)

	ENERGY			ARITH.	CTD
BAND	AVERAGE	MAX	MIN	AVERAGE	STD DEV
Ditto	HARMAGE	rary.	1/3 T 1A	HVENHUE	DEV
14	71.7	76.0	62.9	70 • 7	3 • 3
15	64 • 9	69.2	61.3	64.4	2.0
16	69.0	73.5	59 3	67.6	3.9
17	63 • 7	68.9	55.4	62+3	3.8
16	58 • i	61.4	53.8	57+6	2•i
19	58.0	59.4	55 • 4	57.8	1.3
20	67 • 4	68.8	66.3	67.3	•6
21	61.0	63.5	57.2	60•6	1.8
22	59•6	61.8	56 • 1	59.3	1,9
23	61.0	62 - 1	58 • 3	60 • 9	•9
24	62 • 4	65.2	58 • 6	65.5	1.6
25	63 • 6	65•9	60.5	63.4	1.6
26	65 • 2	68.3	61.5	64.8	2.0
27	63.5	66 • 4	59.6	63.2	1.6
28	64 • 4	67.6	61-4	64 - 1	1.5
29	64.0	66.8	61.7	63.8	1.3
30	63 + 6	66 - 4	61 - 5	63+4	1.2
31	62.0	64.1	60.3	61.9	•9
32	59 • 8	62 • 1	57 • 5	59.7	1.0
33	57 • 1	59.6	55.5	56.9	1.0
34	54 • 4	57.7	52.5	54.2	1.3
35	48 • 4	50.8	46.6	48 • 3	• 9
36	45 • 3	46.5	45.0	45.2	.4
37	45 • 0	45.0	45.0	45.0	•0
38	45.0	45.0	45.0	45.0	•0
39	45.0	45.0	45.0	45.0	•0
43	45 • 0	45.0	45.0	45.0	•0
DBA	71 • 3	73.8	68.9	71.2	1.2
DBD	74.6	77 • 1	72.3	74.5	1 • 1
QASPL	78 • 8	81.2	75 • 1	78 • 4	1.9
PNL	82.0	84.0	79.9	81.9	1.0
PNLT	82 • 0	84.0	79.9	61.9	1.0

Helicopter Location Directly Overhead

# TABLE A-VIII Halicopter Noise Level Pata HUGHES 300C OCTOBER 14, 1976

MAX RMS Noise Level - JBA ne ROMPa MICHOPHONE MICROPHONE NELICOPTER RUN OFFSET TO THE WEST OFFSET TO THE EAST OPER ATTON NUMBER 75M E 150M 69.0 82.0 83.3 84.5 76.0 5Ft. 78.3 69.0 84.5 HOVER **0°** (20°) 77.8 84.5 2 SFŁ. 82.8 77.3 70.5 84.5 10 HOVER (2**35°**) 450 88.0 72.0 74.0 84.5 5Ft. 85.5 70.8 84.8 71.0 HOVER (180°) 900 88.0 73.0 88.8 4 5 Ft. 87.5 73.0 バス 74.0 87.3 HOVER 1350 5 5Ft HOVER 1800 6 5Ft HOVER 2250 5 Ft HOVER 270° 8 5Ft. HOVER 3150 41 500Ft HOVER **0°** (a70°) (90°) 75.5 73.5 74.8 42 500 Ft

1800

\* Microphone at centerline

(°)

HOVER

2700

TABLE A-VIII
Halicopter Noise Level Data
Hughes 300-2

October 14,1876

MAX RMS	Hoise	Level	- d	BA nead	n Fa
---------	-------	-------	-----	---------	------

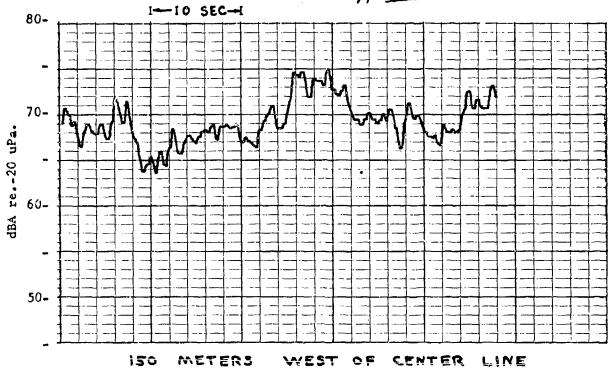
HELI COFTER	RUN		PHONE	MICH OPHONE			
OPER ATION	NUMBER	OFFSET TO	THE WEST	CENTER LINE			
<i>3</i> •							
GLIDE							
SLOPE							
6.	43	74.8	80.0	81.0	70-0		
GLIDE	44	73.0	72.8	72.0	67.8		
SLOPE	45	68.3	69.0	68.8	7/•3		
90	58	72.5		77.3	71.8		
GLIDE SLOPE					·		
67 Mph	26	66.0	69.8	69.0	67.8		
LEVEL				<b>-</b> . ~	68.3		
FLYOVE	27	70.5	69.0	71.5			
	28	69.8	7/.0	71.8	67.3		
76 Mph	29	69.3	7/. 3	72.0	68.8		
LEVEL FLY OVER	30	68.8	71-0	67.5	67.0		
					-		
82 Mph	31	68-3	72-5	67-8	69.0		
LEVEL	33	68.5	73.3	70.0	71.5		
FLYOVER	34	68.8	69.3	70.8	67.5		

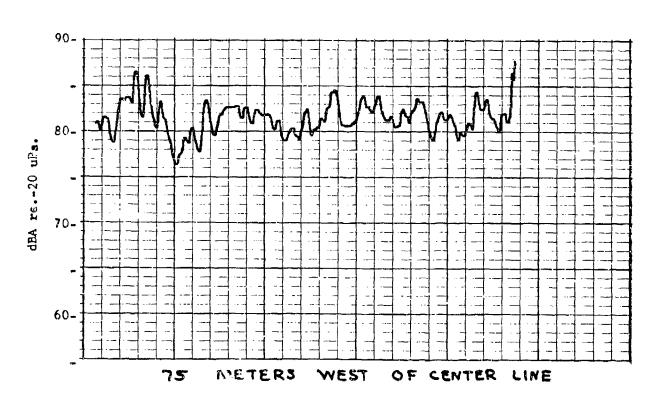
# TABLE A-VIII Helicopter Noise Level Data Hughes 3000 October 14, 1576

max RMS Noise Level - JBA ne ao Ma

41-14	7	MICAC	PHONE	MEROPHONE			
HELI COPTER OPERATION	RUN NUNBER	ISOM	THE WEST	CENTER LINE			
V/ 4/////	7, -7, -7,	13017	LEVIER CAL	CENTER LINE	150M		
82 mph	35	58.5	67.0	67.3	71.0		
LEVEL	36	70.0	68.5	67.3	68.3		
FLYOVER	37	68.0	67.8	66.5	67.5		
90 mph LEVEL FLY OV ER	40	70-2	68.0	69.0	69.5		
LEVEL FLYOVER							
LEVEL FLYOVER				,			
LEVEL FLYOVER							
LEVEL FLY OVER							

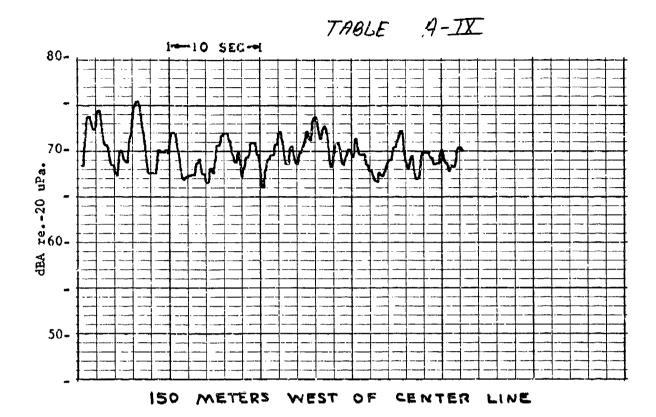


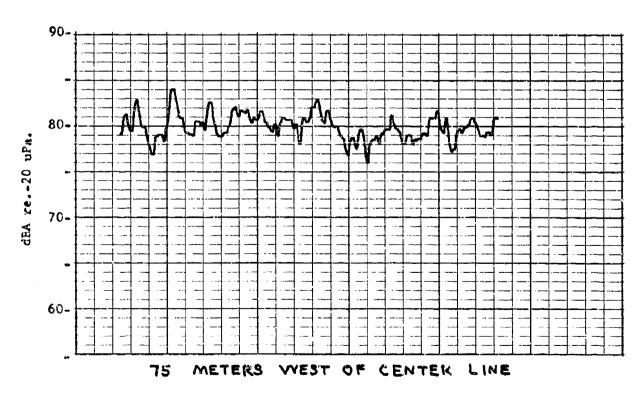




HUGHES 300 C HELICOPTER

90° HOVER - 5 Fi. RUN 3

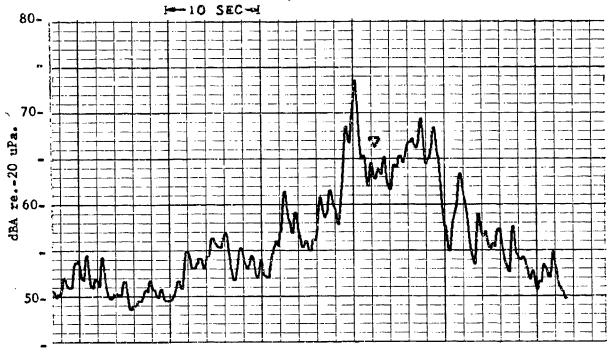




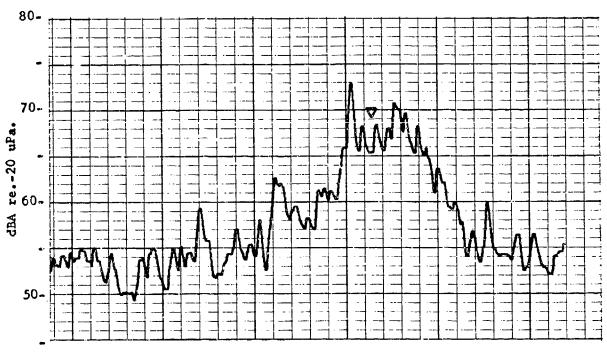
NOISE LEVEL TIME HISTORIES
HUCHES 300 C HELICOPTER
180" HOVER - 5 FT.

RUN 5





150 METERS WEST OF FLIGHT PATH

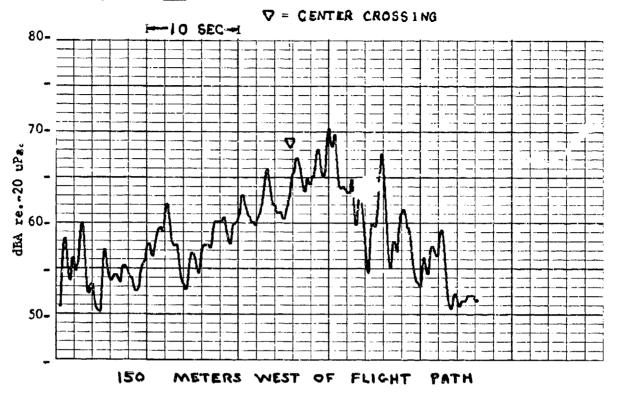


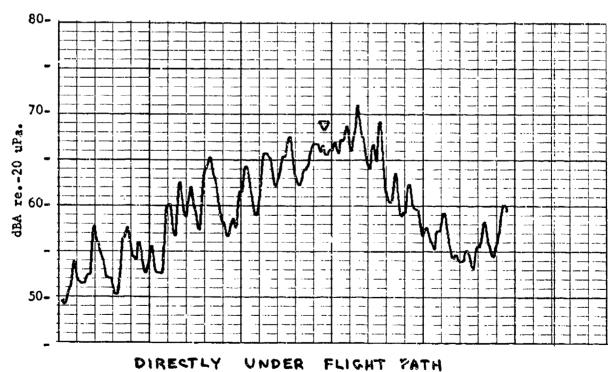
DIRECTLY UNDER FLIGHT PATH

NOISE LEVEL TIME HISTORIES HUGHES 300 C HELICOPTER G APPROACH

RUN 44

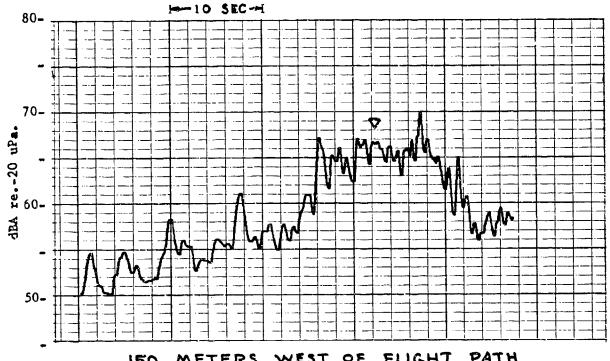
TABLE A-IX



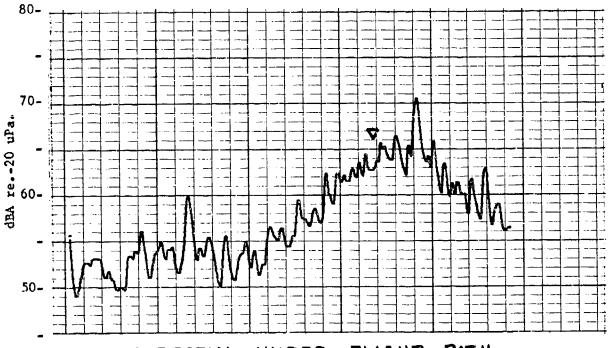


NOISE LEVEL TIME HISTORIES HUGHES 300 C HELICOPTER LEVEL FLYOVER - 60 MPH





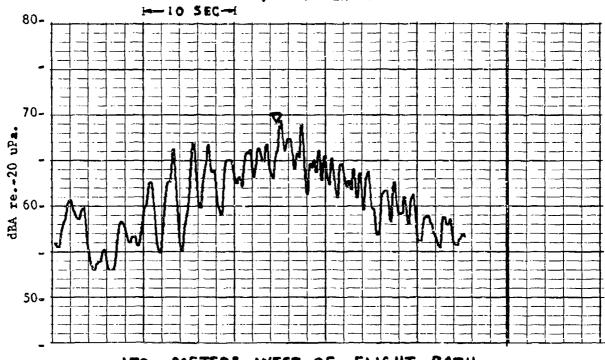
150 METERS WEST OF FLIGHT PATH



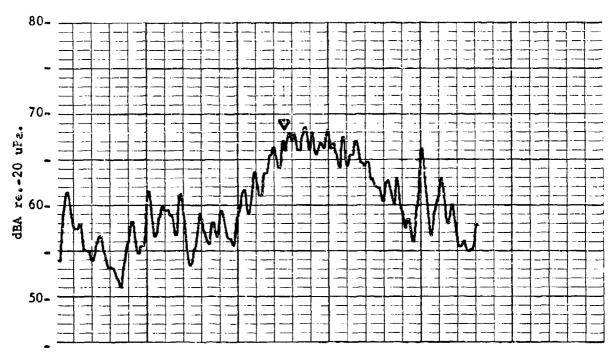
DIRECTLY UNDER FLIGHT PATH

NOISE LEVEL HUGHES 200E LEVEL FLYOVER





#### 150 METERS WEST OF FLIGHT PATH



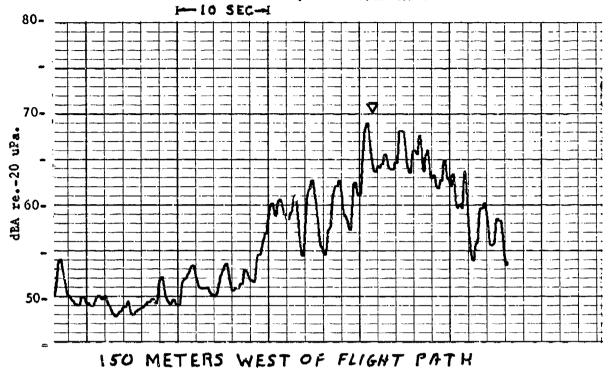
DIRECTLY UNDER FLIGHT PATH

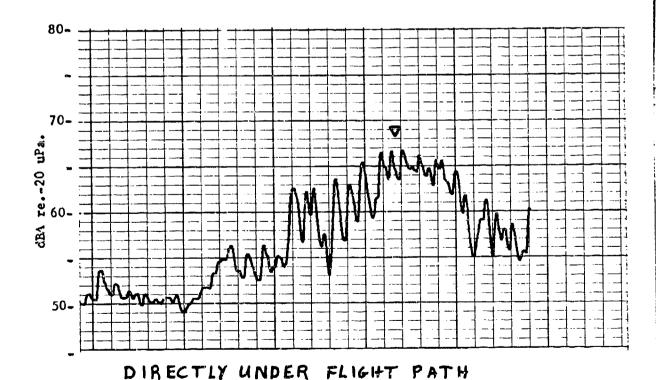
Noise Level Time Histories

HUGHES 300 C HELICOPTER LEVEL FLYOVER - 76 MPH

RUN 34

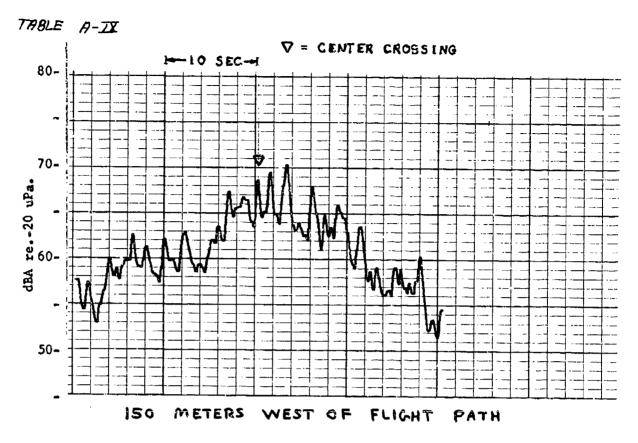


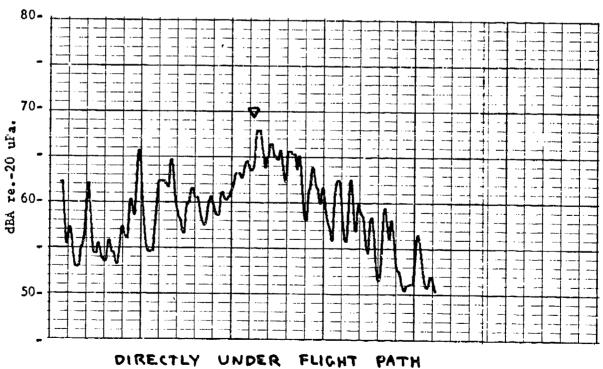




NOISE LEVEL TIME HISTORIES HUGHES 300-C HELICOPTER LEVEL FLYOVER - 82 MPH

RUN 35





NOISE LEVEL TIME HISTORIES HUGHES 300C HELICOPTER LEVEL FLYOVER - 90 MPH

### DATA TABLE B

### HUGHES 500C

TEST DATE:	10-28-76 TEST SITE: NASA LA	NGLEY
SECTION - B	CONTENT	PAGE #
·	RUN LIST	109
II	GROUND AND FLIGHT LOG DATA	112
III	METEOROLOGICAL DATA	114
īV	LEVEL FLYOVER AND APPROACH NOISE DATA	115
v	TIME HISTORIES	117
VI	1/3-OCTAVE BAND SPECTRAFLYOVER AND APPROACH	149
VII	1/3-OCTAVE BAND SPECTRA5 FOOT HOVER	181
VIII	MAXIMUM dBA NOISE LEVEL (ALL RUNS)	197
IX	SELECTED dBA TIME HISTORIESGRAPHIC PLOTS	200

THE NOISE LEVELS PRESENTED IN SECTIONS IV, V AND VI
HAVE BEEN TABULATED FOR THE SELECTED RUNS AND MICROPHONE
LOCATIONS INDICATED ON THE FOLLOWING PAGE.

TABLE B-I
LIST OF RUNS SELECTED FOR ANALYSIS

				MICROPHONE	LOCATION	
			WES	ST	EA	ST
RUN#	TEST CONDITION	ОИ	150 m SIDELINE	CENTER LINE	CENTER LINE	150m SIDELINE
56	3° Approach	69 mph	Ì	x		
58	Level Flyover	69 mph		x		
59		Į.		х		
60		110 mph		x		
6 J.	↓ ↓	.\ <del>\</del>		x		
65	6° Approach	69 mph	x	x		х
€3	9° Approach	69 mph		х		
L04	Level Flyover	130 mph	x	х		х
1.05		1	x	х		x
106		144 mph	x	x	x	х
107		Ţ	x	×	x	x
108		150 mph	x	x		X
109		$\downarrow$	x	x		х
110		130 nph	x	x		х
	Microphone Loca	ations	Over Concrete	Over Concrete	Over Grass	Over Concrete
			110			

### GENERAL COMMENTS

- o There were no problems encountered while testing the Hughes 500C.
- o The weather conditions during the test were moderately windy with gusts in the 5-12 mph range.

TABLE 8-II Ground and Flight Log Data

Date: Oct. 18, 1976		nts			s, glide Shps			List of the second		Triber broke		P. II. Made
		Comments			singly below glide			Abort E. Abort Abort E. S. Abo		good tun good tun Abert		Abort 3
tst.	١	Dind Direction			12	· · ·				12		
	Weather	Seral Seral			7-15 to Pag. Guets to worts					Guits to 18 ets.		
	Ground	H.A			22%				, <del></del>	% %	·	
	9	Temp.			J. Ch					# # # # # # # # # # # # # # # # # # #		
		OMT			400 %	# +	4,14	#		3		ф т
•	•	RPM			2401	8 ± 0/	% to!	<i>№</i>		\$→		₹ — →
Registration Number:	ž.	Wittel			400 A.	\$ →	\$ 35	004 004 004		410 400 400 400		₩ 5
Station	Conditions	7 e e c		<del></del>	£ 3.	30,55	300	1 25 1 20	·	e 6 ú û	-	\$ 3 \$ £ &
Regi	Actual				320 1K	0 ->	0.4	* 9. — ,		**************************************		o
		Air Speed			65 A	70 A	12.011	64.69		\$ 5 →		v
		Heading			10)	100 -	1∕0 →	1v>		10>		12 1w1w1 27
500 6		u 97		785ted	29.0 83.6	77.0	76.5	37.5	Tested	29.5 29.5 2.5	Tastad	1111
Hughes	-	Attive Arcs	70		\$ 8→	% 905 → →	\$ →	\$		\$		*5
	Can ditions	15 1	Testad	Skyenone	Age -	69 mp h	10 - 63	\$ →	Skycrano	1 · · · · · · · · · · · · · · · · · · ·	Skyerane	0
Mode 1:	tonet	7,790	9-5	pky S-64	3. App.	19007	Level Frysuer	• 9 bb.	ky 5-64	. A p.p.	H9-S	Heven
Helicopter		Time	Sitousky	S. Karla Ky	1:45	4:00	50 G	4 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Sikatiky	5 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6	Sitoralty	5.50 A SEC. 19.50
Heli		Run	1-34	35-55	56 57	R S	9 3	3 9 9 9 112	18-99	8 2 2 8	86-73	23882

	3.6		1						
	Test Date: Oct. 28,17%				# 00 t				
	G.		Comments						
	+ 9st		6		75 FF. 57 1/2/2				
	18	$\neg$	7 15		1≥	<del></del>	<del></del>		
Data		her	Creeking	dd					
		Leather	Speed S	See to the	<b>\$</b>	<del></del>			
497		Ground	RH	88	36%				
Flight		Š	Temp.	14. 84.	4 6tt				
ou o			780	2	7.64			<b>.</b>	
Ground	٠.		RPM	₹	2401			>	
Ÿ	Number:	51	Altitude Pares	\$	\$ 000 th	58 4	<b>→</b>	38 5	
B-II	Registration	Conditions	At or	基本基本 更	42 %.	& & &	56 Ri	76 Pe	·
TABLE	Regis	Actus/	45 .	۰	0 ->	0 ->	0 —	<b></b>	
7.8		A	Air Speed	0	18 ->	14n nh/	150 1001	130 4	
			Heading	250 55 270° 51 270° 51	1ળ →	101 →	100→	₩	
	500 C		46 A	1111	11	j l	1 1	١	
		SHI	Alt. tyde	#	£ 025 ↑	æ 8, →	85. ≥	\$6.00	
	Hughes	Conditions	Velocity Att. tyde	o	/30 mph	74 7	150 mp.)	130-61	
	licopter Mode):	Tame?	7, pe	Hove	Lesel Flywer	Level Flysues	revel Fyoder	Leve! Figorer	
	spter		7.me	15:3 04:3 46:4 56:4	67.7	75:4 75:4	5:06 5:07	5:09	
	!ie		<u>c</u>	88682	\$ b	900	10 Or	9/	

TABLE B-III

### Meteorological Data Langley Air Force Base

### October 28, 1976

TIME	TEMP.	BAR. PRESS.	REL. HUM.	WIND SPEED	WIND DIRECTION	REMARKS
(hours)	(of)	(mmhs)	(%)	(mph)	(degrees)	
0800	53	778	62	5-19	0	Sky — Partly Cloudy
0815	53		66	10-19	20	Crowny
0830	53		67	16-23	25	
0845	53		68	14-22	20	
<b>0</b> 900	54		69	9-19	30	
0915	54		70	11-19	30	
<b>093</b> 0	54		69	13-22	<b>2</b> 5	
0945	54		69	8-20	20	
1000	54		69	7-16	30	
1015	54		68	1218	30	
1030	55		67	18-23	40	
1130	54		65	14-18	10	
1145	56		64	10-16	30	
1200	56		64	8-12	35	Sky - Clear
1215	55		63	8-14	20	-
1230	56		60	812	<b>2</b> 0	
1245	56		58	13-18	25	
1300	57	774	56	8-15	40	
1315	58		53	816	40	
1330	57		52	5-12	50	
1345	57		50	8-15	40	Sky — Clear
1400	57		48	8-12	45	_
1415	5?		48	5-12	15	
1430	57		47	5-12	50	
1445	58		48	5-9	30	
1500	57	772	47	58	20	
1515	57		47	6-12	25	
1530	57		47	5 <b>-1</b> 5	60	
1545	58		48	8-11	<b>30</b>	
1600	58		47	8-10	50	
1615	57 56		46	9-11	60	
1630	56		46	5-8	40	
1645	57 57		46	2-9	40	
1700	57 50		47	1-6	25	
1715	56		48	2-7	40	

### TABLE 8-IV

### HELICOPTER APPROACH AND FLYOVER NOISE DATA

### HUGHES 500 C

OCTOBER 28 1976

# MICROPHONE OFFSET 150 METERS WEST (LEVELS-DB RE 20 MICRO PA)

EVENT	EPNL	DBA(M)	DBD(M)	OASPL	PNL(M)	PNLT(M)	LEQ	DUR(A)	DUR (P)	TC
65	86 • 7	74.8	78 • 4	79.3	85.5	85 • 6	71 • 3	23.5	30.5	2 • 3
104	85 • 5	75.0	77.7	79•0	84.8	87.5	71 • 7	16.0	16.0	2.9
105	85.0	73.4	76.3	78.9	83.6	86.2	70 • 3	18.5	22.0	2.6
106	87 • 3	79•5	82.8	83.9	89.6	90+9	76 • 3	11.0	11.0	1 • 3
107	87 • 4	77.7	81.1	82.6	88 • 4	90.0	74.9	13.5	13.5	1.5
108	89•3	80.8	83.3	85.0	90.2	91 • 4	77.2	11.0	19.0	1.9
109	88 • 1	79.0	88 • 3	83•6	88.9	90.2	75 • 1	16.0	16.0	1 • 3
110	87 • 3	77.0	80.0	82.3	87.0	88.2	73 0 1	18.0	21.0	1 • 5

# MICROPHONE OFFSET 150 METERS EAST (LEVELS-DB RE 20 MICRO PA)

EVENT	EPNL	DBA (M)	DBD(M)	OASPL	PNL(M)	PNLT(M)	LEG	DUR (A)	DUR (P)	TC
65		72.2	75 • 8	78+5	83 • 4	83.4	68-4	32.5		1.8
104	84.9	73.5	77.3	78.1	84 • 4	85•7	70 • 6	17.5	21.0	1.8
105	85 • 5	75.6	78.4	79.6	85 • 4	86.8	71.8	17.0	18.5	1 . 4
106	87 • 4	79.0	82 • 6	83 • 8	89.9	91.0	76.3	12.0	10.5	1.2
107	86 • 9	77.8	81 • 1	81 • 9	88 • 4	90 • 8	74 - 1	14.0	10.5	2 . 4
108	89-1	82 • 3	84.9	85.5	91 • 6	91.6	78.5	9.5	11.5	•0
109	89.0	81 • 5	84.5	84 • 8	91 • 4	93.0	77.6	11.0	11.5	2 • 3
110	87 • <b>7</b>	77.0	80 • 3	81 • 4	87 • 6	89.7	74.4	16.0	16.0	2.0

### TABLE B-III

### HELICOPTER APPROACH AND FLYOVER NOISE DATA

#### HUGHES 500 C

OCTOBER 28 1976

### CENTERLINE MICROPHONE - HARD SITE (LEVELS-DB RE 20 MICRO PA)

EVENT	EPNL	DBA(M)	DBD(M)	04SPL	PUL(M)	PNLT(M)	LEQ	DUR (4)	DUR (P)	TC
56	88•4	77 • 8	82 • 4	86.2	90 • 1	0.3 1	74 • 4	14.5	15.5	•0
58	87 • 3	76 • 0	80 • 7	82.9	87.8	90 • 1	72.0	19.0	20.0	•0
					-	87 • 8		-		
59	86 • 8	75.9	80•5	83 • 4	87•7	87 • 7	71.9	17.0	19.0	•0
60	86 • 1	75.9	80 • 4	83•7	87 • 5	87 • 5	72.1	14.5	17.5	•0
61	35 • 7	76.9	81 • 4	83 • B	88•3	88.3	73.0	11-0	12.5	•0
65	89.1	78.3	82 • 5	84.5	89+5	89-8	74.9	18.0	19.0	1 - 1
83	88.4	78.3	83 • 8	85.2	90 • 1	90 • 1	75 • 4	12.5	17.5	•0
104	85 • 8	73 • 1	77.3	79.9	85 • 0	85 • 4	70.5	20.0	22.5	2.5
105	85 • 8	73 •2	77.4	79.8	85.0	85.6	70 • 3	19.5	26.0	1.4
106	87.7	79.1	83.5	85 • 7	91 • 2	91.2	75.4	12.5	10.0	•0
107	87 • 8	77.7	81.9	84 • 5	89.4	89.4	74.4	14.0	16.5	•0
108	89 • 1	80 • <b>7</b>	85.3	87.2	93.0	93.0	76.7	12.5	9.5	•0
109	88.9	19.5	83 • 5	85 • 3	90 • 8	90 - 8	75.4	16.5	18.0	•0
110	88 • 4	78.5	8 • \$8	85 • 4	90 • 3	90.3	74.1	18.0	18.0	•0

#### CENTERLINE MICROPHONE - SOFT SITE (LEVELS-DB RE 20 MICRO PA)

EVENI	EPNL	DBA(M)	DBD(M)	OASPL	PNL(M)	PNLT(M)	LEQ	DUR(4)	DUR (PP)	TC
						90.6				
107	87 • 0	77.0	81 • 4	83 • 3	88 • 5	88.5	78 • 4	21.0	18.0	•0

## TABLE B-I

A STORY & AND PROPERTY AND A STORY OF THE ST

### NOISE LEVEL TIME HISTORY DATA

HUGHES 500 C

OCTOBER 28 1976

EVENT 65. 6 DEGREE APPROACH. MIC. 150 METERS WEST

INT	DBA	DPD	OASPL	PNL	PNLT	PNL-DBA	DBD-DBA
1	60.3	66•6	71.2	74 • 1	75 • 4	13.8	6 • 3
3	59.2	66.3	70.9	73.5	73.5	14.3	7 - 1
5	59.0	66.3	70.7	73.8	73∙8	14.8	7 • 3
7	66.3	70.0	72.6	77.9	77.9	11.6	3 • 7
9	67.8	71.4	73.7	79.7	79.7	11.9	3 • 6
11	66 • 8	70.7	73.8	79 • 1	79 • 1	12.3	3•9
13	66.3	70.4	73-1	78.5	79.8	12.2	4.1
15	66 • 4	70.5	73 • 1	78.0	80.1	11.6	4-1
17	68.7	71.6	73.5	79.4	81.6	10.7	8.9
19	71.5	74.0	74.9	81.3	82.8	9 • 8	2.5
21	73 • 4	75.8	76 • 4	83.3	85•6	9.9	2.4
23	72.3	74.5	75.5	82 • 4	84.4	10 • 1	2.2
25	72.6	75.2	76.4	82.6	82.6	10.0	2•6
27	71.3	74.2	76.4	81.4	83.0	10.1	8•9
29	71 • 1	73.8	77 - 1	81 • 1	81.1	10.0	2•7
31	73 - 4	<b>76.</b> 2	<b>7</b> 8•8	83.5	83•5	10 • 1	2.8
OH →33	73.0	76.2	79.0	83.3	83.3	10.3	3.2
35	72.5	76.1	79.0	83.0	83.0	10.5	3•6
37	71.3	74.9	78.9	82•3	82+3	11.0	3 • 6
39	73.7	77.3	79•0	84 • 4	84•4	10.7	3•6
41	74.4	78•0	<b>78•</b> 8	85•0	85.0	10.6	3•6
43	72.3	76-1	77.0	82•8	83•9	10.5	3•8
45	72.1	75.7	76•9	82•8	84.9	10.7	3•6
47	70.7	74.0	<b>75•9</b>	80•9	80 49	10.2	3 • 3
49	68•4	72•3	73.9	79•9	81.6	11.5	3•9
51	67.0	<b>70.</b> 8	73 • 4	78•9	79.9	11.9	3 • 8
53	64.0	68•9	71.8	76•6	78 • 3	12.6	4.9
<b>5</b> 5	61 • 4	67•3	70•7	75 • 1	75 - 1	13.7	5•9
57	59.2	66.1	71 - 4	<b>7</b> 3•5	73.5	14.3	6.9
59	55•3	65•2	70•5	72.5	72.5	17.2	9•9

### TABLE B-I

### NOISE LEVEL TIME HISTORY DATA

### HUGHES 500 C

OCTOBER 28 1976

### EVENT 104. 130 MPH FLY BY. MIC. 150 METERS WEST

INT	DBA	DBD	OASPL	PNL	PALT	PNL-DBA	DBD-DBA
1	58.3	66.5	70.4	73.7	73.7	15.4	8•2
2	58 • 4	66.7	71.0	74.0	74.0	15.6	8.3
3	59.4	67 • 2	71.9	75.0	75.0	15.6	7.8
4	65.9	69•9	73.0	77.7	78.8	11.8	4.0
5	67 • 4	71.2	74.2	78.9	80.2	11.5	3.8
6	69 • 4	72.9	75-1	80.3	80.3	10.9	3.5
7	70 • 4	73.7	75.8	81 • 4	31.4	11.0	3.3
8	73.6	76.3	77.9	84.0	85.7	10.4	2.7
3	74.8	77 • 4	<b>7</b> 8•8	84.8	87.5	10.0	2•6
10	75.0	77.7	79.0	84.6	87.5	9•6	2.7
11	73.8	76•7	78.1	83.8	86.2	10.0	2.9
12	72.7	75.9	77.6	83.4	84.8	10.7	3.2
13	73.0	75•9	77.8	83.7	84.8	10.7	2.9
14	73.2	76 • 4	<b>7</b> 8•0	33∙8	85.7	10.6	3.2
15	73.5	76.6	78.4	83.8	85.5	10.3	3 • 1
16	73.5	76•8	78 • 4	34.0	84.0	10.5	3.3
17	73.7	76.5	78.4	84.3	84.3	10.6	2.8
18	<b>7</b> 3•8	76.2	78.0	84.0	54.0	10 • ಜ	3 • G
19	<b>7</b> 2•5	<b>75.7</b>	77.6	ช3•5	<b>33∙</b> 5	11.0	3.2
80	72.4	75 • 8	77.2	83•1	83•1	10.7	3 • 4
21	72.2	75 • 4	76.9	83 • 1	83 • 1	10.9	3•2
22	<b>7</b> 2•5	75 • 4	77 • 4	83 • 1	83-1	10.6	2.9
23	<b>7</b> 2 • 1	<b>75.</b> 6	<b>7</b> 8•2	88•8	82•8	10.7	3•5
oH —→ 24	71.8	75.7	<b>7</b> 8 • <b>7</b>	82•4	82.4	10.6	3•9
25	70.9	75 • 4	78•7	82•1	82•1	11.2	4.5
26	70.7	75 • 1	<b>7</b> 8•6	81.9	31.9	11.2	4 • 4
27	71.0	75.3	78 • 4	82.4	85•4	11.4	4.3
28	70.9	75 • 1	77.9	32 • 4	82.4	11.5	4.2
29	70.2	74 • 6	77•2	82•0	82.0	11.8	4.4
30	69.3	73.7	76 • 1	81.0	81.0	11.7	4 • 4
31	63.2	72.9	<b>75•</b> 0	80 • 1	80 • 1	11.9	4.7
32	67.2	72.1	<b>7</b> 3•7	79•0	<b>79•</b> 0	11.8	4.9
33	66.2	71.2	72•3	7੪ ∙ 6	78•6	12.4	5.0
34	65.9	70 • 4	71 • 2	7৫∙৪	78•2	18.3	4.5
35	65.0	69.5	70 • 1	77-3	<b>77•</b> 3	12.3	4.5
36	63 • 4	68 • 4	69•0	76.0	<b>76</b> • 0	12.6	5•0
37	61.3	67.6	68 <b>- 1</b>	74 • 8	76 • 1	13.5	6•3
<b>3</b> 8	60 • 4	67 • 1	68∙∪	74.47	76.5	14.3	6.7

### TABLE B-Y

### NOISE LEVEL TIME HISTORY DATA

#### HUGHES 500 C

OCTOBER 28 1976

### EVENT 105, 130 MPH FLY BY, MIC . 150 METERS WEST

INT	DBA	משמ	OASPL	PNL	PNLT	PNL-DBA	DBD-DBA
1	58•೮	66.2	69•6	73•6	73.6	14.8	7 • 4
2	60 • 2	66.7	70 • 1	74.6	74.6	14 • 4	6 • 5
3	61 • 4	67 • 4	70.9	<b>7</b> 5•5	75 • 5	14+1	6.0
4	62.6	68.2	71.9	76.5	<b>7</b> 8•0	13.9	5 • 6
5	67.2	70 • 4	73.2	<b>7</b> 8•6	78 • 6	11 • 4	3.2
6	70 • 1	72.3	74.4	80•2	80.2	10.1	2.2
7	71.0	72.8	74.6	80•5	80•5	9•5	1 •8
8	70 • 1	72.2	74.3	<b>79•</b> 8	81.5	9.7	2 • 1
9	68.7	71 • 4	73.5	79.0	81.2	10.3	2•7
10	68.7	71.6	73.5	79.1		10.4	2.9
11	69.8	72.3	74.3	79.9		10 • 1	ē•5
12	71.2	73.3	75 • 5	81 • 4		10.2	2 • 1
13	72.2	74 • B	76 • 7	82•6		10 • 4	5.6
14	73 • 4	75•9	77 • 6	83•4	<b>४</b> 5•४	10.0	2.5
15	73 • 4	76.3	<b>7</b> 8•0	ხ3∙6	86•2	10.8	2.9
16	72.5	75.5	77.8	88•9	85.2	10-4	3.0
17	71.0	74.5	77。4	82•2	83•3	11.2	3.5
18	70.7	74.5	77•6	82•5	82.5	11.8	3 • 8
19	70 • B	74.6	77 • 4	82.5	82.5	11.7	3 • 8
20	70.9	74.7	77.2	୪ଥ∙5	82.5	11 • 6	3•੪
21	70 • 7	74.6	76.8	88 • 5	82.2	11.5	3.9
22	70.9	74•7	76.9	85 •0	82.0		3 • ∺
23	70 • 9	75.2	<b>77 -</b> 2	82.5	82.5	11.6	4 • 3
24	70•7	75 • 1	77.5	82 • 4	82.4	11 • 7	4 • 4
25	71.6	<b>75•</b> 8	78.2	82.9	82.9	11.3	4.2
o# <del>-&gt;</del> 26	71.9	76 • 1	78•7	85.9	85.9	11.0	4.2
27	71.9	76.2	78.9	୫S • ନ	88.8	10.9	4.3
88	71.5	75.8	78 • 8	82 • 4	82.4	10.9	4 • 3 4 • 3
29	71.3	75.5	<b>7</b> ⊌•5	82 • 1	82•1		4.2
30	71.0	75.2	77.9	82.3	82.3		4.4
31	70 •0	74.4	77.2	82.0	88.0		4 • 4
32	69•9	74.3	76 • 7	82 • 1	82.1		
33	69 • 4	74.0	76 • 0	81 • 5	81•5 80•3		4 • 4
34	69.0	73.4	75.2	80.8	80.3		4.5
35	67.8	72.3	74 • 3	80 • 3 80 • 1	80.1	12.3	4.5
36	67.3	71 • 8	73 • 6		79.2		
37	66 • 4	71.0	72 • 4	79•2	77.8	12.3	4 • 4
38	65.5	69•9	71 • 3	77•8	78 • 1	13.3	4.7
39	64 • 3	69+0	70 • 6	76 • 6 76 • 5	73.2	12.9	5•3
40	63 • 6	63•9 64.3	70 • 7 70 • 4	76•2	77.9		5.8
41	62 • 5	68+3	70 • 4	76 • 1	76.1	13.7	5.0
42	62 • 4	68 • 3 68 • 0	70 • 4	75•9	75.9		5 • <b>7</b>
43	62 • 3	68•0	,0.0	1.547	, , , ,	• 5 - 5	•••

### TABLE B-V

### NOISE LEVEL TIME HISTORY DATA

### HUGHES 500 C

OCTOBER 28 1976

### EVENT 106, 144 MPH FLY BY, MIC. 150 METERS WEST

INT	DBA	DBD	OASPL	PNL	PNLT	PNL-DBA	DBD-DBA
1	67•5	71 • 3	74.3	77•9	79 - 1	10.4	3.8
8	66 • 8	70.5	74.2	77.0	78.5	10.2	3 • 7
3	66 • 1	70 • 1	74.6	76 • 4	77.9	10.3	4.0
4	71 • 1	74.0	77-1	80 • 4	82 • 1	9•3	2.9
5	73 • 4	76.2	78.6	82.5	83.7	9 • 1	2•8
6	73.7	76•6	79.2	82.8	84.0	9 + 1	2.9
7	74.3	77 • 1	79•5	84.0	85 • 4	9•7	2.8
5	75∙8	78 • 6	80 • 4	85 • 6	85 <b>•6</b>	9•8	8•8
9	79•0	81.7	82.6	88 • 1	88 <b>- 1</b>	9•1	2.7
10	79•3	82.2	83 • 1	88.3	88.3	9.0	2.9
11	79.5	82 • 8	<b>∀3∙6</b>	89 • 1	89 • 1	9•6	3 • 3
12	78.5	82 • 4	83.5	89.2	89•2	10.7	3•9
13	78 • 4	82 • 4	83 • 8	89.6	90.9	11.2	4.0
14	77 • 1	81 • 3	83.0	88 <b>•7</b>	88 <b>.7</b>	11.6	4.2
15	76•7	80•7	82•4	87 • 6	<b>ყ</b> 7∙6	10.9	4.0
16	76 • 6	80.6	82.2	86•7	86•7	10.1	4 • 0
$oH \longrightarrow 17$	77.3	81 • 1	83 • 4	87.2	87.2	9•9	3∙8
18	77 • 1	81.0	83.9	87.5	87.5	10.4	3•9
19	76.9	80 <b>• 7</b>	83•8	87.3	87.3	10 • 4	3•8
20	76.0	79•7	82.9	86•4	87.6	10 • 4	3 • 7
21	75.0	78.7	81 • 6	85•3	86•5	10.3	3•7
88	73.5	77.2	80 • 1	83•8	83•8	10.3	3 • 7
23	72 • 1	75•8	78•3	82.3	83.5	10.2	3 • 7
24	70.7	74 • 4	76.8	81.2	82.3	10.5	3 • 7
25	69.0	72.9	75 • 1	79 • 4	79.4	10.4	3 • 9
26	66.8	71.0	73.2	77.5	78.9	10.7	4.2
27	64.5	69 • 1	71.5	75.9	76.9	11.4	4.6
28	62.7	67.5	70 • 5	74.5	74.5	11.8	4.8

### TABLE 8-V

### NOISE LEVEL TIME HISTORY DATA

HUGHES 500 C

OCTOBER 28 1976

### EVENT 107. 144 MPH FLY BY. MIC. 150 METERS WEST

# 1/2 SECOND INTEGRATION VS NOISE INDEXES (DB RE 20 MICRO PA)

INT	DHA	מפט	OASPL	PNL	PNLT	PNL-DBA	DBD-DBA
1	61.9	67.9	71.2	75•7	77.1	13.8	6•0
2	61.5	67.9	72.0	75.9	77•4	14 • 4	6 • 4
3	65•0	69.7	73.3	77 • 1	77-1	12.1	4 • 7
4	68•5	71.9	74 • 4	79.0	80 • 7	10.5	3 • 4
5	69.1	72.4	74.9	79•4	80•8	10.3	3 • 3
6	69•7	72.7	75.4	79.9	80•9	10.2	3.0
7	69.9	73.2	76.0	80•3	80•3	10 • 4	3•3
ಕ	74.4	77 • 1	78•7	84.2	86∙5	9•8	2.7
9	76.4	79.0	80.2	86•3	88•2	9•9	2.6
10	77•5	80 • 1	81 • 1	87•5	88•8	10.0	2.6
11	77.5	80 • 3	81 • 4	87.6	8 <b>7 •</b> 6	10 + 1	2.8
12	77.2	80 • 4	81.6	87•3	87•3	10 • 1	3•2
13	77.7	81 - 1	82 • 4	87.8	87.8	10 • i	3 • 4
14	77.4	81.0	82.6	88.2	89.4	10 • 8	3 • 6
15	77.0	80•9	82 • 4	88•4	90•0	11 • 4	3 • 9
16	75.6	79•9	81 • 7	87.8	87.8	12.2	4•3
17	75.6	79.9	81 • 8	87.5	87.5	11.9	4.3
18	<b>75 •</b> 8	79•6	81.8	86•8	86•8	11.0	3∙8
19	75.9	79•5	81 • 6	86•3	86•3	10 • 4	3 • 6
<i>OH</i> <del>&gt;</del> 20	75 • 4	78 • 8	81 • 4	85•4	85•4	10.0	3 • 4
21	75.4	<b>7</b> 8•8	81.9	85•6	85•6	10.2	3 • 4
22	75.2	78•9	82 • 4	85•7	85 <b>- 7</b>	10.5	3•7
23	75.1	79.0	82.3	85•7	85•7	10.6	3 • 9
24	74.4	78.3	81.5	85•4	85•4	11.0	3.9
25	73.9	77•5	80 • 7	84.9	84.9	11 • 0	3•6
26	72.9	76.7	79.7	84.2	84.2	1i•3	3 • 8
27	72.0	75•7	78 • 5	83.0	83.0	11.0	3 • 7
28	70.6	74.5	76.9	81-4	81 - 4	10.8	3.9
29	69-1	73 • 1	75 • 1	80•2	81 • 4	11.1	4.0
30	67.4	71.8	73 • 6	79.0	80.4	11.6	4 • 4
31	66.3	70.6	71 • 9	77•9	77.9	11.6	4.3
32	64.4	59 • 1	70 • 4	76.7	76•7	12.3	4.7
33	62.1	67.9	68 • 7	75 • 4	76.9	13.3	5 • 8

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### TABLE B-I

### NOISE LEVEL TIME HISTORY DATA

### HUGHES 500 C

OCTOBER 28 1976

### EVENT 108, 150 MPH FLY BY, MIC. 150 METERS WEST

INT	DBA	DBD	OASPL	PNL	PNLT	PNL-DBA	DBD-DBA
1	63.5	70 • 0	73 • 8	77•3	78 • 4	13.8	6+5
2	65.8	71.6	74.6	78.5	80 • 1	12.7	5 • 8
3	68.9	73.4	75.8	80.0	81.3	11.1	4.5
4	70 • 6	74.3	76.6	81.0	82.4	10.4	3.7
5	71.9	74.9	77 • 6	81.7	83 • 1	9.8	3.0
6	73.8	76-1	79.0	83.2	84.5	9 • 4	2.3
7	75.2	77•7	80 • 1	84.7	86.2	9.5	2.5
8	75.9	78.9	81.0	85.7	86.9	9.3	3.0
9	76.3	79.5	81.9	86.2	86.2	9.9	3.2
10	77.6	80.5	82.9	87 • 4	88.9	9.8	2.9
11	79.8	82 • 4	84.3	89 • 4	90.8	9.6	2.6
12	80.8	83.3	84.7	90.2	90.2	9.4	2.5
13	8C • 4	83.2	84.5	90 • 1	90.1	9.7	2.8
14	78.6	0.58	83.5	89.0	89.0	10 • 4	3 • 4
15	77.5	81.6	83 • 3	89.2	89.2	11.7	4 • 1
16	77.3	81.7	83 • 7	89.5	89.5	12.2	4.4
17	78.2	82.4	84 • 4	89.8	89.8	11-6	4.2
18	78.5	82.5	84.8	89.5	91.4	11.0	4.0
OH <del>&gt;</del> 19	78 • 4	82.3	85.0	89.2	91.0	10.8	3.9
20	77.9	81.6	84.8	88.7	90.1	10.8	3.7
21	76.8	80 • 6	84.2	87.6	88.9	10.8	3 • 8
55	76.0	79•5	83.0	86.5	88.1	10.5	3 • 5
23	74.5	78.2	81 • 6	85.3	87.0	10.8	3 • 7
24	73.0	76•9	<b>79 •</b> 8	84.0	84.0	11.0	3.9
25	71.5	75•4	78 • 4	82.7	82.7	11.2	3.9
26	69•3	73.5	76.7	81.3	82.8	12.0	4.2
27	67.2	72.0	75.3	80•0	81.3	12.8	4.8
28	65.0	70 • 6	73 • 6	78.2	78.2	13.2	5•6

### TABLE B-V

### NOISE LEVEL TIME HISTORY DATA

#### HUGHES 500 C

OCTOBER 28 1976

### EVENT 109, 150 MPH FLY BY, MIC. 150 METERS WEST

INT	DBA	DBD	OASPL	PNL	PNLT	PNL-DBA	DBD-DBA
1	62.9	68.8	69.7	76.6	76.6	13.7	5•9
2	64 • 4	70.2	71 • 4	77.9	78.9	13.5	5 • 8
3	66.2	71.2	72.6	<b>78•</b> 8	79•9	12.6	5•0
4	69 • 6	73 • 1	74 • 4	80.2	81 • 4	10.6	3 • 5
5	71.8	74.8	75 • 7	81.3	82.6	9•5	3 • 0
6	72.5	75 • 4	76.2	81.8	83•1	9•3	2•9
7	71.9	75.1	75•9	81.4	82.7	9•5	3.2
8	73.1	76.0	77.0	82 • 7	84.0	9•6	2.9
9	73.9	76.6	77.6	83 • 4	84.8	9 • 5	2.7
10	74.0	76.4	77.9	83.4	84.9	9 • 4	2 • 4
11	71.8	74.4	76.8	81.5	83.0	9•7	2•6
12	69•6	73 - 1	76.7	80.2	80.2	10 • 6	3•5
13	69•6	73 • 7	77.0	80.3	80.3	10.7	4 • 1
14	72.5	76.0	78.1	82.4	83.6	9.9	3 • 5
15	75•9	79.1	80•0	85•5	87.2	9 • 6	3.2
16	76.5	79.8	80•9	86.3	88.0	9•8	3•3
17	77•9	80•9	82.2	87•7	87.7	9 • 8	3.0
18	78.2	81.5	82.9	88.2	89.5	10.0	3 • 3
19	79.0	62•3	83.6	88• <del>9</del>	90-2	9+9	3 • 3
20	78 • 6	82 • 1	83.6	88.8	88 • 8	10.2	3.5
21	77.6	81.2	83.0	88.5	88 • 5	10.9	3•6
22	76+3	80 • 1	82.3	88•2	88•2	11.9	3•8
23	75 • 4	79•3	81.8	8 <b>7•</b> 5	87.5	12.1	3.9
24	75 • 6	79•5	81.9	87.0	88•3	11-4	3•9
25	76 • 4	80.0	82.5	86.5	86.5	10.1	3•6
OH <del>&gt;</del> 26	76.8	80•6	83.2	87.0	87•0	10.2	3.8
27	76 • 8	80 • 6	83.6	87.1	87.1	10.3	3∙8
28	76.2	80.0	83.3	86•7	86•7	10.5	3•8
29	75.4	79.0	82.5	86 • 1	86 • 1	10.7	3 • 6
30	74.5	78 • 1	81.3	85 • 1	86•1	10.6	3 • 6
31	73.4	77•2	80.0	84.0	84.0	10.6	3∙8
32	71.9	76.0	78 • 1	82•3	82 • 3	10 • 4	4 • 1
33	71.3	75•2	76.9	81 • 6	82.8	10.3	3.9
34	70.2	74 - 1	75.5	80•7	80•7	10.5	3•9
35	68.7	72.4	74.2	79.6	79•6	10.9	3.7
36	65•7	70 • 4	72.4	77.9	79•3	15.5	4.7
37	64.2	69•4	71 + 1	76.8	77•9	12.6	5•2
38	63.7	69•0	70.5	76.5	76.5	12.8	5•3

### TABLE B-I

### NOISE LEVEL TIME HISTORY DATA

### HUGHES 500 C

OCTOBER 28 1976

### EVENT 110. 130 MPH FLY BY. MIC. 150 METERS WEST

INT DBA DBD	OASPL	PNL	PNLT	PNL-DBA	DBD-DBA
1 65.0 69.8	71 • 3	78 • 1	79•5	13.1	4.8
2 65.9 70.3		78 • 6			4.4
3 65.7 70.0			78•5	12.8	4.3
4 67.1 70.0		78.2	79 • 4	11.1	2.9
5 68.6 71.0				10.1	2.4
	73.7		80.6	9.5	2.3
7 68.7 71.8			80 • 4	10.4	3 • 1
8 67.2 71.4			80.2		4.2
9 65.0 70.4			79 • 7		5 • 4
10 64.3 70.0	73.0	77.6			5•7
11 63.4 69.5	72.9	77.2	78 • 6		6-1
12 63.7 69.8			78 • 3		
13 65.5 70.4			78•6		4.9
14 66.9 70.9				11.1	4.0
15 68 • 1 71 • 6			80.0		3 • 5
16 70.5 73.3		80 • 4	80 • 4	9.9	2.8
17 73.6 76.2		83.2	84.4	9•6	2.6
18 75.4 77.9		85•2 86•7	87.0	9.8	2.5
19 76.7 79.4		86.7	88.2	10.0	2.7
20 77.0 79.6	80.9	86.9	86.9		2-6
21 77.0 79.7		87•0 86•8	87.0		2.7
22 76.3 79.4	81 • 2 81 • 0	86.8	86 • 8	10.5	3 • 1
23 75.5 78.9		86 • 4		10.9	3 • 4
24 74.9 78.8		86•3	87.8	11 • 4	3.9
25 74.2 78.3	80.2	85•8 85 • 8	87.3	11.6	4 • 1
26 74 • 1 78 • 2	80.2	85.6	86.8	11.5	4 • 1
27 74 • 2 78 • 4	80.7	85.4	87.0	11.2	4.2
28 75•2 79•3	81 • 4	85.8	87.3	10.6	4 • 1
29 75•9 80•0	82.0	86•3	86.3	10.4	4 • 1
OH-→30 75.9 79.9	82.3	86-1	86.1	10.2	4.0
31 75.5 79.5	82.2	86.2	86.2	10.7	4.0
32 74.6 78.7	81.6	85.6	85.6	11-0	4 - 1
33 73.9 78.1	80.8	85.0	85.0	11-1	4.2
34 73 • 1 77 • 3		83 • 8	83.8	10.7	4.2
35 72·3 <b>7</b> 6·4	1 78 <b>•7</b>	82.8	82.8	10.5	
36 71 • 1 75 • 2	77•3	82.0			
37 69.7 74.0		80•9	82.3	11.2	
38 67.9 72.4		79.6	80 • 6	11.7	
39 66.8 71.4 40 65.7 70.5	72.4	78•7	78 • 7		4 • 6
		78•7 77•9	79.6		
41 65 • 1 69 • 9		17.4	78.9		
42 63.9 68.8	69.7	76.5	76.5	12.6	4•9

### TABLE B-Y

### NOISE LEVEL TIME HISTORY DATA

#### HUGHES 500 C

OCTOBER 28 1976

### EVENT 65. 6 DEGREE APPROACH. MIC. 150 METERS EAST

INT	DBA	DBD	OASPL	PNL	PNLT	PNL-DBA	DBD-DBA
1	57.0	64.8	71.5	72.9	72.9	15.9	
3	57.7	65.0	70 • 6	73.3	74.3	15.6	7 • 3
5	56.7	65.0	72.5	73.0	73.0	16.3 14.2 12.1 12.8	8 • 3
7	60 • 5	66+5	73 - 6	74-7	75 • 9	14.2	6•0
9	66 - 1	69.9	74-1	78 • 2	30 • 4	12.1	3 • ₿
11	65.0	69.3	74 • 4	77.8	79.7	12.8	4 • 3
13	60•0	67.1	<b>77•</b> 3	74•8	76•2	14•8	7 • 1
15	59•Q	66•7	77 • 6	74.2	76.2	15.2	7 • 7
	59.9	66.9	76.7	74.5	76.2	14.6	7.0
19	62.5	68.3	77.4	76 • 1	77.6	13.6 11.0 11.7 12.1	5 • 8
21	69.0	71.3	77.0	0.08	81.0	11.0	2 • 3
23	68 • 1	71.3	76•7	<b>7</b> 9•8	79•8	11.7	3 • 2
25	67.2	71.1	75∙8	79•3	80.4	12.1	3 • 9
27	68•1	71.5	76•2	79.7	81.5	11.6	3 • 4
	68•3	71.5	76•0	79•3	80•8	11.0	3.2
31	66•8	70.9	75 • 1	78•3	79.9	11.5 12.0 11.5	4 • 1
33	66 • 3	70.7	74.7	78•3	79 • 4	12.0	4 • 4
3 5	67.9	72.0	75•7	79•4	81.3	11.5	$4 \cdot 1$
37	69•3	73 • 4	77•2	80•9	83.2	11•6	4 • 1
39	71 • 1	74.5	78 • 4	82•3	82•3	11.2	3 • 4
41	70 • 6	74.2 72.6 74.3 75.3	77•B	81.6	81,6	11.0 11.6 10.8 10.7	3 • 6
43	68 • 8 70 • 7	72.6	75•4	80 • 4	80 • 4	11.6	3 • 8
45	70 • 7	74.3	75•4	81.5	81.5	10.8	3 • 6
O.H -47 + 48	71 - 6	75•3	76.5	82.3	82•3	10.7	3 • 7
	71.3	75•4	77•1	82.5	82.5	11.2	4 • 1
5.1	71.7	75.6	77 • 1	82•4	82 • 4	10.7	3.9
53	71.9	75.7	77 • 4	83.3	83.3	11 · 4 11 · 1 10 · 9 11 · 3	3 • 8
55	72.0	75.7	77 • 6	83 • 1	83 • 1	11.1	3 • 7
57	70 • 3	74-3	77 • 1	81.2	81.2	10.9	4.0
59	67 • 9	72.1	75•9	79.2	80.7	11.3	4.2
61		71.0				11.7	
63		71.2				11.5	
65	64.6	69.2	73.9	77.1	78 • 1	12.5	4.6
67	65•0	69•3 68•3 68•1	73 • 5	77•0 76•0 75•4	77•0	12.0	4.3
69	63 • 7	68 • 3	72 • 5	76•0	76.0	12•3 12•9	4.6
71	62.5	68 • 1	72.0	75 • 4	76 • 6		
73	60 • 7	67•3	72.2	74.6	75•7	13.9	6•6

### TABLE B-V

### NOISE LEVEL TIME HISTORY DATA

### HUGHES 500 C

OCTOBER 28 1976

### EVENT 104, 130 MPH FLY BY, MIC. 150 METERS EAST

$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	INT	DBA	DBD	OASPL	PNL	PNLT	PNL-DBA	DBD-DBA
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	1	59 • 8	67 • 4	72.6	75.5	76 • 6	15.7	7•6
$\begin{array}{cccccccccccccccccccccccccccccccccccc$		60 • 5				75 • 8	15.3	7 • 1
$\begin{array}{cccccccccccccccccccccccccccccccccccc$								
6 68.6 72.1 75.4 79.2 81.0 10.6 3.5 7 688.3 71.9 75.5 79.1 79.1 10.8 3.6 8 67.1 71.1 75.1 78.5 79.9 11.4 4.0 9 68.6 71.8 75.2 79.2 81.5 10.6 3.2 10 70.3 73.6 76.0 80.8 83.8 10.5 3.3 11 70.9 74.2 76.4 81.3 84.0 10.4 3.3 12 71.2 74.4 76.6 82.0 84.0 10.8 3.2 13 71.6 74.7 76.5 82.3 82.3 10.7 3.1 14 72.4 75.9 77.0 83.3 85.0 10.9 3.5 15 73.3 77.1 77.8 83.9 85.7 10.6 3.8 16 73.2 77.3 78.0 83.7 84.9 10.5 4.1 17 73.5 77.2 78.1 84.1 84.1 10.6 3.7 18 73.2 76.8 77.8 84.2 84.2 11.0 3.6 19 73.1 76.7 77.9 84.4 84.4 11.3 3.6 20 72.0 76.1 77.4 83.9 83.9 11.9 4.1 12 71.4 75.6 76.8 83.4 83.4 12.0 4.2 22 71.0 74.7 76.0 82.2 82.2 11.2 3.7 23 71.1 74.3 75.9 81.7 81.7 10.6 3.2 77.2 78.1 84.1 83.9 83.9 11.9 4.1 12 71.4 75.6 76.8 83.4 83.4 12.0 4.2 22 71.0 74.7 76.0 82.2 82.2 11.2 3.7 23 71.1 74.3 75.9 81.7 81.7 10.6 3.2 77.2 78.1 76.7 77.9 84.4 84.4 11.3 3.6 22 77.0 76.1 77.4 83.9 83.9 11.9 4.1 21 71.4 75.6 76.8 83.4 83.4 12.0 4.2 22 71.0 74.7 76.0 82.2 82.2 11.2 3.7 23 71.1 74.3 75.9 81.7 81.7 10.6 3.2 72.2 72.0 76.1 77.4 83.9 83.9 11.9 3.6 22 82.2 11.2 3.7 72.3 72.6 76.6 77.2 83.0 83.0 10.4 3.7 23 72.2 72.6 76.6 77.2 83.0 83.0 10.4 3.7 28 72.8 76.6 77.2 83.0 83.0 10.4 3.7 28 72.9 76.6 77.2 83.0 83.0 10.4 3.7 28 72.9 76.6 77.2 83.0 83.0 10.4 3.7 28 72.9 76.6 77.1 82.9 82.9 10.0 3.7 3.7 3.0 69.4 73.2 74.0 80.7 71.3 3.8 3.0 83.0 10.4 3.7 3.8 3.0 69.4 73.2 74.0 80.7 71.3 3.8 3.0 83.0 10.4 3.7 3.7 3.0 69.4 73.2 74.0 80.7 71.3 3.8 3.0 65.7 69.5 71.4 77.8 77.8 77.8 12.1 3.8 3.5 65.3 69.4 71.2 77.7 77.7 77.7 12.4 4.1 3.8 3.5 65.3 69.4 71.2 77.7 77.7 77.7 12.4 4.1 3.8 3.5 65.3 69.4 71.2 77.7 77.7 77.7 12.4 4.1 3.8 3.5 65.3 69.4 71.2 77.7 77.7 77.7 12.4 4.1 3.8 3.5 65.3 69.4 71.2 77.7 77.7 77.7 12.4 4.1 3.8 3.5 65.3 69.4 71.2 77.7 77.7 77.7 12.4 4.1 3.8 3.5 65.3 69.4 71.2 77.7 77.7 77.7 12.4 4.1 3.8 3.5 65.3 69.4 71.2 77.7 77.7 77.7 12.4 4.1 3.8 3.5 65.3 69.4 71.2 77.7 77.7 77.7 12.4 4.1 3.8 3.5 65.3 69.4 71.2 77.7 77.7 77.7 12.4 4.1 3.8 3.5 65.3 69.4 71.2 77.7 77.7 77.7 12.4 4.1 3.8 3.9 61.5 67.0 68.5 74.7 76.1 13.2 5.5 5.4 60.2 41 58.9 65.	4	65.0	69.9		77.4	79 • 1	12.4	
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	5	68 • 4	71.9	74.9	79.1	80.9	10.7	3.5
8 67.1 71.1 75.1 78.5 79.9 11.4 4.0 9 68.6 71.8 75.2 79.2 81.5 10.6 3.2 10 70.3 73.6 76.0 80.8 83.8 10.5 3.3 11 70.9 74.2 76.4 81.3 84.0 10.4 3.3 12 71.2 74.4 76.6 82.0 84.0 10.8 3.2 13 71.6 74.7 76.5 82.3 85.0 10.9 3.5 15 73.3 77.1 77.8 83.9 85.7 10.6 3.8 16 73.2 77.3 78.0 83.7 84.9 10.5 4.1 17 73.5 77.2 78.1 84.1 84.1 10.6 3.7 18 73.2 76.8 77.2 78.1 84.2 84.2 11.0 3.6 19 73.1 76.7 77.9 84.4 84.4 84.1 10.6 3.7 18 73.2 76.8 77.9 84.4 84.4 11.3 3.6 20 72.0 76.1 77.4 83.9 83.9 83.9 11.9 4.1 21 71.4 75.6 76.8 83.4 83.4 83.4 12.0 4.2 22 71.0 74.7 76.0 82.2 82.2 11.2 3.7 23 71.1 74.3 75.9 81.7 81.7 81.2 3.7 24 71.5 75.1 76.5 82.4 82.4 10.9 3.6 72.4 71.5 75.1 76.5 82.4 82.4 10.9 3.6 72.4 71.5 75.1 76.5 82.4 82.4 10.9 3.6 72.9 72.9 76.6 77.1 82.9 82.9 10.0 3.7 28 72.9 76.6 77.1 82.9 82.9 10.0 3.7 29 71.2 74.9 75.5 81.9 81.9 10.7 3.7 29 71.2 74.9 75.5 81.9 81.9 10.7 3.7 3.7 3.7 3.8 32 67.2 70.9 75.5 81.9 81.9 10.7 3.7 3.7 3.7 3.8 32 67.2 70.9 75.5 81.9 81.9 10.7 3.7 3.7 3.7 3.8 32 67.2 70.9 75.5 81.9 81.9 10.7 3.7 3.7 3.7 3.9 75.5 81.9 81.9 10.7 3.7 3.7 3.7 3.9 75.5 81.9 81.9 10.7 3.7 3.7 3.7 3.9 75.5 81.9 81.9 10.7 3.7 3.7 3.7 3.9 75.5 81.9 81.7 77.7 77.7 12.4 4.1 3.8 3.5 65.3 69.4 71.2 77.7 77.6 77.6 11.5 3.7 3.7 3.7 3.9 75.6 64.4 68.6 70.3 76.9 77.6 11.5 3.7 3.7 3.9 64.4 68.6 70.3 76.9 77.6 11.5 3.7 3.8 3.9 61.5 67.0 68.5 74.7 76.1 13.2 5.5 4.0 3.9 61.5 67.0 68.5 74.7 76.1 13.2 5.5 4.0 59.7 65.9 67.3 73.6 73.6 73.6 14.7 6.6	6	68.6	72.1	75 • 4	79.2	81.0	10.6	3 • 5
$\begin{array}{cccccccccccccccccccccccccccccccccccc$		68•3			79.1	79 - 1	10.8	3.6
10 70·3 73·6 76·0 80·8 83·8 10·5 3·3 11 70·9 74·2 76·4 81·3 84·0 10·4 3·3 12 71·2 74·4 76·6 82·0 84·0 10·8 3·2 13 71·6 74·7 76·5 82·3 82·3 10·7 3·1 14 72·4 75·9 77·0 83·3 85·0 10·9 3·5 15 73·3 77·1 77·8 83·9 85·7 10·6 3·8 16 73·2 77·3 78·0 83·7 84·1 10·6 3·7 18 73·2 76·8 77·2 78·1 84·1 84·1 10·6 3·7 18 73·2 76·8 77·2 84·4 84·4 11·3 3·6 19 73·1 76·7 77·9 84·4 84·4 11·3 3·6 20 72·0 76·1 77·4 63·9 63·9 11·9 4·1 21 71·4 75·6 76·8 83·4 83·4 12·0 4·2 22 71·0 74·7 76·0 82·2 82·2 11·2 3·7 23 71·1 74·3 75·9 81·7 81·7 10·6 3·2 0 72·0 76·1 77·2 83·0 83·0 10·4 3·7 26 72·8 76·6 77·2 83·0 83·0 10·4 3·7 26 72·8 76·6 77·2 83·0 83·0 10·4 3·7 27 72·9 76·6 77·1 82·9 82·9 10·0 3·7 28 72·1 75·8 76·9 81·7 81·7 10·6 3·2 27 72·9 76·6 77·1 82·9 82·9 10·0 3·7 29 71·2 74·9 75·5 81·9 81·9 10·0 3·7 30 69·4 73·2 74·0 80·7 80·7 11·3 3·8 31 67·9 71·7 73·0 79·6 77·6 11·5 3·7 33 66·1 69·8 71·4 77·6 77·6 11·5 3·7 34 65·7 69·5 71·4 77·8 77·8 12·1 3·8 35 65·3 69·4 71·2 77·6 77·6 11·5 3·7 36 65·1 69·1 70·9 77·6 77·6 11·5 3·7 37 64·4 68·6 70·3 76·9 76·9 12·5 4·2 38 63·0 67·8 69·4 75·6 75·6 75·6 12·5 4·0 37 64·4 68·6 70·3 76·9 76·9 12·5 4·2 38 63·0 67·8 69·4 75·6 75·6 12·5 4·0 39 61·5 67·0 68·5 74·7 76·1 13·2 5·5 40 59·7 65·9 67·3 73·9 75·6 14·2 6·2 41 58·9 65·5 67·0 73·6 73·6 14·7 6·6			71.1	75 • 1	78.5	79.9		4 • 0
$\begin{array}{cccccccccccccccccccccccccccccccccccc$							10.6	3.2
12       71⋅2       74⋅4       76⋅6       82⋅0       84⋅0       10⋅8       3⋅2         13       71⋅6       74⋅7       76⋅5       82⋅3       82⋅3       10⋅7       3⋅1         14       72⋅4       75⋅9       77⋅0       83⋅3       85⋅0       10⋅9       3⋅5         15       73⋅3       77⋅1       77⋅8       83⋅9       85⋅7       10⋅6       3⋅8         16       73⋅2       77⋅3       78⋅0       83⋅7       84⋅9       10⋅5       4⋅1         17       73⋅5       77⋅2       78⋅1       84⋅1       10⋅6       3⋅7         18       73⋅2       76⋅8       77⋅8       84⋅2       84⋅2       11⋅0       3⋅6         19       73⋅1       76⋅7       77⋅9       84⋅4       84⋅4       11⋅3       3⋅6         20       72⋅0       76⋅1       77⋅4       63⋅9       63⋅9       11⋅9       4⋅1         21       71⋅4       75⋅6       76⋅8       83⋅4       83⋅4       12⋅0       4⋅2         22       71⋅0       74⋅7       76⋅0       82⋅2       82⋅2       11⋅2       3⋅7         23       71⋅1       74⋅7       76⋅0       82⋅4	10		73•6				10.5	3 • 3
13							10 • 4	3 • 3
14 72.4 75.9 77.0 83.3 85.0 10.9 3.5 15 73.3 77.1 77.8 83.9 85.7 10.6 3.8 16 73.2 77.3 78.0 83.7 84.9 10.5 4.1 17 73.5 77.2 78.1 84.1 84.1 10.6 3.7 18 73.2 76.8 77.8 84.2 84.2 11.0 3.6 19 73.1 76.7 77.9 84.4 84.4 11.3 3.6 20 72.0 76.1 77.4 83.9 83.9 11.9 4.1 21 71.4 75.6 76.8 83.4 83.4 12.0 4.2 22 71.0 74.7 76.0 82.2 82.2 11.2 3.7 23 71.1 74.3 75.9 81.7 81.7 10.6 3.2 24 71.5 75.1 76.5 82.4 82.4 10.9 3.6 25 72.6 76.8 77.2 83.0 83.0 10.4 3.7 26 72.8 76.6 77.2 83.0 83.0 10.4 3.7 26 72.8 76.6 77.2 83.0 83.0 10.2 3.8 27 72.9 76.6 77.1 82.9 82.9 10.0 3.7 28 72.1 75.8 76.3 82.4 82.4 10.3 3.7 29 71.2 74.9 75.5 81.9 81.9 10.7 3.7 30 69.4 73.2 74.0 80.7 80.7 11.3 3.8 31 67.9 71.7 73.0 79.6 79.6 11.7 3.8 32 67.2 70.9 72.5 78.9 78.9 78.9 11.7 3.8 35 65.3 69.4 71.2 77.4 77.8 77.8 12.1 3.8 35 65.1 69.1 70.9 77.6 77.6 11.5 3.7 37 33 66.1 69.8 71.6 77.6 77.6 11.5 3.7 3.7 33 66.1 69.8 71.0 71.4 77.8 77.8 12.1 3.8 35 65.3 69.4 71.2 77.7 77.7 77.7 12.4 4.1 36 65.7 69.5 71.4 77.8 77.8 12.1 3.8 35 65.3 69.4 71.2 77.7 77.7 77.7 12.4 4.1 36 65.7 69.5 71.4 77.8 77.8 12.1 3.8 35 65.3 69.4 71.2 77.7 77.7 77.7 12.4 4.1 3.8 39 61.5 67.0 68.5 74.7 76.1 13.2 5.5 4.0 59.7 65.9 67.0 73.6 73.6 14.7 6.6			74.4				10.8	
15								3 • 1
16								
17 73.5 77.2 78.1 84.1 84.1 10.6 3.7 18 73.2 76.8 77.8 84.2 84.2 11.0 3.6 19 73.1 76.7 77.9 84.4 84.4 11.3 3.6 20 72.0 76.1 77.4 83.9 63.9 11.9 4.1 21 71.4 75.6 76.8 83.4 83.4 12.0 4.2 22 71.0 74.7 76.0 82.2 82.2 11.2 3.7 23 71.1 74.3 75.9 81.7 81.7 10.6 3.2 71.5 75.1 76.5 82.4 82.4 10.9 3.6 25 72.6 76.6 77.2 83.0 83.0 10.4 3.7 26 72.8 76.6 77.1 82.9 82.9 10.0 3.7 28 72.9 76.6 77.1 82.9 82.9 10.0 3.7 28 72.1 75.8 76.3 82.4 82.4 10.3 3.7 29 71.2 74.9 75.5 81.9 81.9 10.7 3.7 30 69.4 73.2 74.0 80.7 80.7 11.3 3.8 31 67.9 71.7 73.0 79.6 79.6 11.7 3.8 32 67.2 70.9 72.5 78.9 78.9 11.7 3.8 32 67.2 70.9 72.5 78.9 78.9 11.7 3.8 32 67.2 70.9 72.5 78.9 78.9 11.7 3.8 35 65.3 69.4 71.2 77.6 77.6 77.6 11.5 3.7 3.7 34 65.7 69.5 71.4 77.8 77.8 77.8 12.1 3.8 35 65.3 69.4 71.2 77.7 77.6 77.6 11.5 3.7 3.7 34 65.7 69.5 71.4 77.8 77.8 12.1 3.8 35 65.3 69.4 71.2 77.7 77.6 77.6 12.5 4.0 37 64.4 68.6 70.3 76.9 76.9 12.5 4.2 38 63.0 67.8 67.0 68.5 74.7 76.1 13.2 5.5 40 59.7 65.9 67.0 68.5 74.7 76.1 13.2 5.5 40 59.7 65.9 67.0 73.6 73.6 14.2 6.2 41 58.9 65.5 67.0 73.6 73.6 14.7 6.6								
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20 72.0 76.1 77.4 83.9 83.9 11.9 4.1 21 71.4 75.6 76.8 83.4 83.4 12.0 4.2 22 71.0 74.7 76.0 82.2 82.2 11.2 3.7 23 71.1 74.3 75.9 81.7 81.7 10.6 3.2 71.5 75.1 76.5 82.4 82.4 10.9 3.6 25 72.6 76.3 77.2 83.0 83.0 10.4 3.7 26 72.8 76.6 77.2 83.0 83.0 10.4 3.7 26 72.8 76.6 77.2 83.0 83.0 10.2 3.8 27 72.9 76.6 77.1 82.9 82.9 10.0 3.7 28 72.1 75.8 76.3 82.4 82.4 10.3 3.7 29 71.2 74.9 75.5 81.9 81.9 10.7 3.7 30 69.4 73.2 74.0 80.7 80.7 11.3 3.8 31 67.9 71.7 73.0 79.6 79.6 11.7 3.8 32 67.2 70.9 72.5 78.9 78.9 11.7 3.8 32 67.2 70.9 72.5 78.9 78.9 11.7 3.7 33 66.1 69.8 71.6 77.6 77.6 11.5 3.7 3.7 34 65.7 69.5 71.4 77.8 77.8 12.1 3.8 35 65.3 69.4 71.2 77.7 77.7 12.4 4.1 36 65.1 69.1 70.9 77.6 77.6 12.5 4.0 37 64.4 68.6 70.3 76.9 76.9 12.5 4.2 38 63.0 67.8 69.4 75.6 75.6 12.6 4.8 39 61.5 67.0 68.5 74.7 76.1 13.2 5.5 40 59.7 65.9 67.3 73.9 75.6 14.2 6.2 41 58.9 65.5 67.0 73.6 73.6 14.7 6.6								
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$\begin{array}{c} 23 \\ \bigcirc OH \longrightarrow 24 \\ \bigcirc 24 \\ \bigcirc 71.5 \\ \bigcirc 75.1 \\ \bigcirc 75.1 \\ \bigcirc 76.5 \\ \bigcirc 82.4 \\ \bigcirc 83.0 \\ \bigcirc 83.0 \\ \bigcirc 10.4 \\ \bigcirc 3.7 \\ \bigcirc 26 \\ \bigcirc 72.8 \\ \bigcirc 76.6 \\ \bigcirc 77.2 \\ \bigcirc 76.6 \\ \bigcirc 77.2 \\ \bigcirc 83.0 \\ \bigcirc 83.0 \\ \bigcirc 10.4 \\ \bigcirc 3.7 \\ \bigcirc 26 \\ \bigcirc 72.8 \\ \bigcirc 76.6 \\ \bigcirc 77.1 \\ \bigcirc 82.9 \\ \bigcirc 82.9 \\ \bigcirc 10.0 \\ \bigcirc 3.7 \\ \bigcirc 28 \\ \bigcirc 72.1 \\ \bigcirc 75.8 \\ \bigcirc 76.3 \\ \bigcirc 82.4 \\ \bigcirc 82.4 \\ \bigcirc 82.4 \\ \bigcirc 10.3 \\ \bigcirc 3.7 \\ \bigcirc 29 \\ \bigcirc 71.2 \\ \bigcirc 74.9 \\ \bigcirc 75.5 \\ \bigcirc 81.9 \\ \bigcirc 81.9 \\ \bigcirc 81.9 \\ \bigcirc 10.7 \\ \bigcirc 3.7 \\ \bigcirc 30 \\ \bigcirc 69.4 \\ \bigcirc 73.2 \\ \bigcirc 74.0 \\ \bigcirc 80.7 \\ \bigcirc 80.7 \\ \bigcirc 80.7 \\ \bigcirc 11.3 \\ \bigcirc 3.8 \\ \bigcirc 31 \\ \bigcirc 67.9 \\ \bigcirc 71.7 \\ \bigcirc 73.0 \\ \bigcirc 79.6 \\ \bigcirc 79.6 \\ \bigcirc 79.6 \\ \bigcirc 79.6 \\ \bigcirc 11.7 \\ \bigcirc 3.8 \\ \bigcirc 32 \\ \bigcirc 67.2 \\ \bigcirc 70.9 \\ \bigcirc 72.5 \\ \bigcirc 78.9 \\ \bigcirc 78.9 \\ \bigcirc 78.9 \\ \bigcirc 78.9 \\ \bigcirc 11.7 \\ \bigcirc 3.7 \\ \bigcirc 33 \\ \bigcirc 66.1 \\ \bigcirc 69.8 \\ \bigcirc 71.6 \\ \bigcirc 77.6 \\ \bigcirc 77.6 \\ \bigcirc 11.5 \\ \bigcirc 3.7 \\ \bigcirc 34 \\ \bigcirc 65.7 \\ \bigcirc 69.5 \\ \bigcirc 71.4 \\ \bigcirc 77.8 \\ \bigcirc 77.6 \\ \bigcirc 77.6 \\ \bigcirc 11.5 \\ \bigcirc 3.7 \\ \bigcirc 3.8 \\ \bigcirc 35 \\ \bigcirc 65.3 \\ \bigcirc 69.4 \\ \bigcirc 71.2 \\ \bigcirc 77.7 \\ \bigcirc 77.7 \\ \bigcirc 77.7 \\ \bigcirc 12.4 \\ \bigcirc 4.1 \\ \bigcirc 3.8 \\ \bigcirc 35 \\ \bigcirc 65.3 \\ \bigcirc 69.4 \\ \bigcirc 71.2 \\ \bigcirc 77.7 \\ \bigcirc 77.7 \\ \bigcirc 77.7 \\ \bigcirc 77.7 \\ \bigcirc 12.4 \\ \bigcirc 4.1 \\ \bigcirc 3.8 \\ \bigcirc 37 \\ \bigcirc 64.4 \\ \bigcirc 68.6 \\ \bigcirc 70.3 \\ \bigcirc 76.9 \\ \bigcirc 76.9 \\ \bigcirc 76.9 \\ \bigcirc 12.5 \\ \bigcirc 4.2 \\ \bigcirc 28 \\ \bigcirc 65.5 \\ \bigcirc 67.0 \\ \bigcirc 68.5 \\ \bigcirc 74.7 \\ \bigcirc 76.1 \\ \bigcirc 13.2 \\ \bigcirc 5.5 \\ \bigcirc 40 \\ \bigcirc 59.7 \\ \bigcirc 65.9 \\ \bigcirc 67.3 \\ \bigcirc 73.6 \\ \bigcirc 73.6 \\ \bigcirc 14.7 \\ \bigcirc 6.6 \\ \bigcirc 6.6 \\ \bigcirc $								
CH→24     71.5     75.1     76.5     82.4     82.4     10.9     3.6     25     72.6     76.3     77.2     83.0     83.0     10.4     3.7     26     72.8     76.6     77.1     82.9     82.9     10.0     3.7     28     72.1     75.8     76.3     82.4     82.4     10.3     3.7     29     71.2     74.9     75.5     81.9     81.9     10.7     3.7     30     69.4     73.2     74.0     80.7     80.7     11.3     3.8     31     67.9     71.7     73.0     79.6     79.6     11.7     3.8     32     67.2     70.9     72.5     78.9     78.9     11.7     3.7     33     66.1     69.8     71.6     77.6     77.6     11.5     3.7     34     65.7     69.5     71.4     77.8     77.8     77.7     77.7     12.4     4.1     36     65.1     69.1     70.9     77.6     77.6     77.7     77.7     12.4     4.1     36     65.1     69.1     70.9     77.6     77.6     77.6     12.5     4.0     37     64.4     68.6     70.3     76.9     76.9     76.9     12.5     4.0     39     61.5     67.0     68.5     74.7     76.1     13.2     5.5     40     59.7     65.9     67.3     73.9     75.6     14.2     6.2     41     58.9     65.5     67.0     73.6     73.6     73.6     14.7     6.6								
25       72.6       76.3       77.2       83.0       83.0       10.4       3.7         26       72.8       76.6       77.1       82.9       82.9       10.0       3.7         28       72.1       75.8       76.3       82.4       82.4       10.3       3.7         29       71.2       74.9       75.5       81.9       81.9       10.7       3.7         30       69.4       73.2       74.0       80.7       80.7       11.3       3.8         31       67.9       71.7       73.0       79.6       79.6       11.7       3.8         32       67.2       70.9       72.5       78.9       78.9       11.7       3.7         33       66.1       69.8       71.6       77.6       77.6       11.5       3.7         34       65.7       69.5       71.4       77.8       77.8       12.4       4.1         36       65.1       69.4       71.2       77.7       77.7       12.4       4.1         36       65.1       69.1       70.9       77.6       77.6       12.5       4.0         37       64.4       68.6       70.3       7								
26       72.8       76.6       77.2       83.0       83.0       10.2       3.8         27       72.9       76.6       77.1       82.9       82.9       10.0       3.7         28       72.1       75.8       76.3       82.4       82.4       10.3       3.7         29       71.2       74.9       75.5       81.9       81.9       10.7       3.7         30       69.4       73.2       74.0       80.7       80.7       11.3       3.8         31       67.9       71.7       73.0       79.6       79.6       11.7       3.8         32       67.2       70.9       72.5       78.9       78.9       11.7       3.7         33       66.1       69.8       71.6       77.6       77.6       11.5       3.7         34       65.7       69.5       71.4       77.8       77.8       12.1       3.8         35       65.3       69.4       71.2       77.7       77.7       12.4       4.1         36       65.1       69.1       70.9       77.6       77.6       12.5       4.0         37       64.4       68.6       70.3       7					82 • 4	82-4		
27       72.9       76.6       77.1       82.9       82.9       10.0       3.7         28       72.1       75.8       76.3       82.4       82.4       10.3       3.7         29       71.2       74.9       75.5       81.9       81.9       10.7       3.7         30       69.4       73.2       74.0       80.7       80.7       11.3       3.8         31       67.9       71.7       73.0       79.6       79.6       11.7       3.8         32       67.2       70.9       72.5       78.9       78.9       11.7       3.7         33       66.1       69.8       71.6       77.6       77.6       11.5       3.7         34       65.7       69.5       71.4       77.8       77.7       12.4       4.1         35       65.3       69.4       71.2       77.7       77.7       12.4       4.1         36       65.1       69.1       70.9       77.6       77.6       12.5       4.0         37       64.4       68.6       70.3       76.9       76.9       12.5       4.2         38       63.0       67.8       69.4       7								
28       72·1       75·8       76·3       82·4       82·4       10·3       3·7         29       71·2       74·9       75·5       81·9       81·9       10·7       3·7         30       69·4       73·2       74·0       80·7       80·7       11·3       3·8         31       67·9       71·7       73·0       79·6       79·6       11·7       3·8         32       67·2       70·9       72·5       78·9       78·9       11·7       3·7         33       66·1       69·8       71·6       77·6       77·6       11·5       3·7         34       65·7       69·5       71·4       77·8       77·8       12·1       3·8         35       65·3       69·4       71·2       77·7       77·7       12·4       4·1         36       65·1       69·1       70·9       77·6       77·6       12·5       4·0         37       64·4       68·6       70·3       76·9       76·9       12·5       4·2         38       63·0       67·8       69·4       75·6       75·6       12·6       4·8         39       61·5       67·0       68·5       7								
29       71.2       74.9       75.5       81.9       81.9       10.7       3.7         30       69.4       73.2       74.0       80.7       80.7       11.3       3.8         31       67.9       71.7       73.0       79.6       79.6       11.7       3.8         32       67.2       70.9       72.5       78.9       78.9       11.7       3.7         33       66.1       69.8       71.6       77.6       77.6       11.5       3.7         34       65.7       69.5       71.4       77.8       77.8       12.1       3.8         35       65.3       69.4       71.2       77.7       77.7       12.4       4.1         36       65.1       69.1       70.9       77.6       77.6       12.5       4.0         37       64.4       68.6       70.3       76.9       76.9       12.5       4.2         38       63.0       67.8       69.4       75.6       75.6       12.6       4.8         39       61.5       67.0       68.5       74.7       76.1       13.2       5.5         40       59.7       65.9       67.3       7								
30       69.4       73.2       74.0       80.7       80.7       11.3       3.8         31       67.9       71.7       73.0       79.6       79.6       11.7       3.8         32       67.2       70.9       72.5       78.9       78.9       11.7       3.7         33       66.1       69.8       71.6       77.6       77.6       11.5       3.7         34       65.7       69.5       71.4       77.8       77.8       12.1       3.8         35       65.3       69.4       71.2       77.7       77.7       12.4       4.1         36       65.1       69.1       70.9       77.6       77.6       12.5       4.0         37       64.4       68.6       70.3       76.9       76.9       12.5       4.2         38       63.0       67.8       69.4       75.6       75.6       12.6       4.8         39       61.5       67.0       68.5       74.7       76.1       13.2       5.5         40       59.7       65.9       67.3       73.6       73.6       14.7       6.6         41       58.9       65.5       67.0       7								
31       67.9       71.7       73.0       79.6       79.6       11.7       3.8         32       67.2       70.9       72.5       78.9       78.9       11.7       3.7         33       66.1       69.8       71.6       77.6       77.6       11.5       3.7         34       65.7       69.5       71.4       77.8       77.8       12.1       3.8         35       65.3       69.4       71.2       77.7       77.7       12.4       4.1         36       65.1       69.1       70.9       77.6       77.6       12.5       4.0         37       64.4       68.6       70.3       76.9       76.9       12.5       4.2         38       63.0       67.8       69.4       75.6       75.6       12.6       4.8         39       61.5       67.0       68.5       74.7       76.1       13.2       5.5         40       59.7       65.9       67.3       73.9       75.6       14.2       6.2         41       58.9       65.5       67.0       73.6       73.6       14.7       6.6								
32       67.2       70.9       72.5       78.9       78.9       11.7       3.7         33       66.1       69.8       71.6       77.6       77.6       11.5       3.7         34       65.7       69.5       71.4       77.8       77.8       12.1       3.8         35       65.3       69.4       71.2       77.7       77.7       12.4       4.1         36       65.1       69.1       70.9       77.6       77.6       12.5       4.0         37       64.4       68.6       70.3       76.9       76.9       12.5       4.2         38       63.0       67.8       69.4       75.6       75.6       12.6       4.8         39       61.5       67.0       68.5       74.7       76.1       13.2       5.5         40       59.7       65.9       67.3       73.9       75.6       14.2       6.2         41       58.9       65.5       67.0       73.6       73.6       14.7       6.6								
33       66.1       69.8       71.6       77.6       77.6       11.5       3.7         34       65.7       69.5       71.4       77.8       77.8       12.1       3.8         35       65.3       69.4       71.2       77.7       77.7       12.4       4.1         36       65.1       69.1       70.9       77.6       77.6       12.5       4.0         37       64.4       68.6       70.3       76.9       76.9       12.5       4.2         38       63.0       67.8       69.4       75.6       75.6       12.6       4.8         39       61.5       67.0       68.5       74.7       76.1       13.2       5.5         40       59.7       65.9       67.3       73.9       75.6       14.2       6.2         41       58.9       65.5       67.0       73.6       73.6       14.7       6.6								
34       65.7       69.5       71.4       77.8       77.8       12.1       3.8         35       65.3       69.4       71.2       77.7       77.7       12.4       4.1         36       65.1       69.1       70.9       77.6       77.6       12.5       4.0         37       64.4       68.6       70.3       76.9       76.9       12.5       4.2         38       63.0       67.8       69.4       75.6       75.6       12.6       4.8         39       61.5       67.0       68.5       74.7       76.1       13.2       5.5         40       59.7       65.9       67.3       73.9       75.6       14.2       6.2         41       58.9       65.5       67.0       73.6       73.6       14.7       6.6								
35       65.3       69.4       71.2       77.7       77.7       12.4       4.1         36       65.1       69.1       70.9       77.6       77.6       12.5       4.0         37       64.4       68.6       70.3       76.9       76.9       12.5       4.2         38       63.0       67.8       69.4       75.6       75.6       12.6       4.8         39       61.5       67.0       68.5       74.7       76.1       13.2       5.5         40       59.7       65.9       67.3       73.9       75.6       14.2       6.2         41       58.9       65.5       67.0       73.6       73.6       14.7       6.6								
36       65.1       69.1       70.9       77.6       77.6       12.5       4.0         37       64.4       68.6       70.3       76.9       76.9       12.5       4.2         38       63.0       67.8       69.4       75.6       75.6       12.6       4.8         39       61.5       67.0       68.5       74.7       76.1       13.2       5.5         40       59.7       65.9       67.3       73.9       75.6       14.2       6.2         41       58.9       65.5       67.0       73.6       73.6       14.7       6.6								
37       64.4       68.6       70.3       76.9       76.9       12.5       4.2         38       63.0       67.8       69.4       75.6       75.6       12.6       4.8         39       61.5       67.0       68.5       74.7       76.1       13.2       5.5         40       59.7       65.9       67.3       73.9       75.6       14.2       6.2         41       58.9       65.5       67.0       73.6       73.6       14.7       6.6								
38       63.0       67.8       69.4       75.6       75.6       12.6       4.8         39       61.5       67.0       68.5       74.7       76.1       13.2       5.5         40       59.7       65.9       67.3       73.9       75.6       14.2       6.2         41       58.9       65.5       67.0       73.6       73.6       14.7       6.6								
39     61.5     67.0     68.5     74.7     76.1     13.2     5.5       40     59.7     65.9     67.3     73.9     75.6     14.2     6.2       41     58.9     65.5     67.0     73.6     73.6     14.7     6.6								
40       59.7       65.9       67.3       73.9       75.6       14.2       6.2         41       58.9       65.5       67.0       73.6       73.6       14.7       6.6								
41 58.9 65.5 67.0 73.6 73.6 14.7 6.6								
	4 8	30.3	00.0			13.0	14•/	0.0

### TABLE 8-Y

### NOISE LEVEL TIME HISTORY DATA

### HUGHES 500 C

OCTOBER 28 1976

### EVENT 105. 130 MPH FLY BY. MIC. 150 METERS EAST

INT	DBA	DBD	OASPL	PNL	PNLT	PNL-DBA	DBD-DBA
1	58∙5	66 • 0	71.5	74.0	74.0	15.5	<b>7•</b> 5
2	60 • 4	67.2	72.2	75.0	<b>7</b> 5•0	14.6	<b>6•</b> 8
3	63.5	69 • 1	73•2	76.6	76.6	13.1	5•6
4	65.2	70 • 2	73•8	77.6	77.6	12.4	5•0
5	66.5	70.9	74.3	<b>7</b> 8•3	79 • 6	11.8	4 • 4
6	68.6	72.1	75.0	79.6	81.3	11.0	3 • 5
7	69.2	72.4	75.2	79•9	81 • 6	10.7	3.2
ರ	69.2	72.7	75•3	80.2	80 = 8	11+0	3•5
9	70.0	73 • 4	75•5	80•6	80 • 6	10.6	3 • 4
10	31.8	74.8	76.4	81.8	84•0	10.0	3•0
11	72.3	74.8	76 • 1	81.8	84.2	9•5	2•5
12	71.4	74.0	75•7	81.1	83.7	9•7	8•6
13	71.5	74.0	76.2	81.4	83 • 1	9.9	2.5
14	72.3	74.8	77.0	82.3	83 • 5	10.9	2.5
15	72.9	75.5	77.3	82.8	83.9	9•9	2•6
16	73.5	76.3	77•5	83•4	85•8	9.9	2 • 8
17	74.4	77-1	78 - 1	84.4	86•6	$0 \bullet 0$	2 • <b>7</b>
18	75.6	78.2	79.2	85 • 4	86•8	9•3	8•6
19	75.6	78 • 4	79.6	85•3	85•3	9•7	2•3
20	75.3	78.3	79 • 4	85•4	85•4	10.1	3•0
21	74.4	77.5	78•7	84.7	84.7	10.3	3 • 1
22	73.5	76.7	77.8	84.1	84.1	10.6	3•2
23	72.6	76•0	77.1	83.7	83.7	11.1	3 • 4
24	71.0	74.7	76.1	82.6	82•6	11.6	3 • 7
25	70 • 4	73.8	75.6	81.3	81.3	10.9	3 • 4
26	69.5	72.9	75.5	81.0	81.0	11.5	3 • 4
27	70.9	74 • 6	76.6	81 • ម	81.8	10.9	3 • 7
он>28	71.9	75 • 8	77.6	82.7	82•7	10.8	3•9
29	72.0	76 • 1	77•8	82.9	82.9	10.9	4 • 1
30	71.6	75.9	77 - 4	82.6	82.6	11.0	4.3
31	71.0	75•4	77•0	82.4	82.4	11 • 4	4 • 4
32	71.4	75.3	76.9	88.3	82.3	10.9	3•9
33	70.9	74.6	76 • 4	82.0	82.0	11.1	3 • 7
34	70.2	73.5	<b>75•</b> 2	81.1	81 • 1	10.9	3 • 3
35	68•5	71 • 8	74.0	79.7	79•7	11.2	3 • 3
36	67.0	70 • 7	72.9	78.6	78 • 6	11.6	3.7
37	65•5	69•7	72 • 1	78 • 1	78 • 1	12.6	4 • 2
38	64 • 1	68 • B	71.2	77.4	77.4	13.3	4 • 7
39	62.9	67 <b>-</b> 8	70•3	76.5	76.5	13.6	4.9
40	62.1	67.0	69•3	<b>7</b> 5∙8	75.8	13.7	4 • 9
			1.	<b>7 <sup>←</sup>7</b>			

### TABLE 8-V

### NOISE LEVEL TIME HISTORY DATA

HUGHES 500 C

OCTOBER 28 1976

### EVENT 106, 144 MPH FLY BY, MIC. 150 METERS EAST

INT	DBA	DBD	OASPL	PNL	PNLT	PNL-DBA	DBD-DBA
1	67.9	71.6	75 • 6	77.8	77.8	9.9	3 • 7
2	66.9	70.8	75.0	77 • 1	77.1	10.2	3•9
3	67 • 1	70.4	74.9	77.2	78.5	10.1	3 • 3
4	69.2	72.1	75.7	78.9	80.3	9.7	2.9
5	70 • 4	73.0	76 • 4	79•7	80.8	9•3	2.6
6	71 - 1	73.8	77 • 1	80 • 4	80 • 4	9•3	2.7
7	74 - 1	76.5	78 • 7	82.9	82.9	8 • 8	2.4
8	77.7	80 • 1	81 - 3	86.3	86.3	8 • 6	2.4
9	78 • 7	81 • 4	82.4	87 • 4	87.4	8 • 7	2.7
10	78.5	81.5	82.5	87 • 7	87.7	9.2	3 • 0
11	77.9	81.0	82.3	87.4	87.4	9•5	3 ∘ 1
12	78.5	81.9	83.0	88.5	88.5	10.0	3 • 4
13	79.0	82.6	83 • 8	89.9	91.0	10.9	3 • 6
14	78.3	82.2	83 • 2	89.8	91.0	11.5	3.9
15	76.8	80.7	81.7	88.5	88.5	11.7	3.9
16	75.7	79•B	80.2	86-4	86 - 4	10.7	4 • 1
OH ->17	76.3	80.0	80 • 3	86.3	86 • 3	10.0	3.7
18	77 - 1	80.8	81.0	86.9	86.9	9.8	3•7
19	77.6	81.1	81.5	0.88	88.0	10.4	3 • 5
20	77.8	81.3	81.9	88.4	88 - 4	10.6	3 • 5
21	77 • 4	80.9	81.5	88 • G	88.0	10.6	3.5
22	76.5	79.9	80.7	86.9	86.9	10 • 4	3 - 4
23	74.9	78-3	79.3	85-1	ಕ5•1	10.2	3 • 4
24	73.2	76.6	78 • 1	83.3	83•3	10.1	3 • 4
25	71.4	75 • 3	76•8	82.0	82.0	10.6	3.9
26	70•5	74.3	75.8	81 • 1	81 - 1	10.6	3•8
27	69•0	72.8	74.4	79.5	80.3	10.5	3.8
28	67.5	71.0	73 • 1	78.4	<b>79 •</b> 5	10.9	3•5
29	65.9	69.5	72.2	77•3	78 • 3	11.4	3.6
30	64.7	68.3	71.2	76•3	77.5	11.6	3•6

### TABLE 8-X

### NOISE LEVEL TIME HISTORY DATA

HUGHES 500 C

OCTOBER 28 1976

EVENT 107. 144 MPH FLY BY: MIC. 150 METERS EAST

INT	DBA	DBD	OASPL	PNL	PNLT	PNL-DBA	DBD-DBA
1	66•3	69.7	72 • 8	7 <b>7</b> -4	77.4	11.1	3 - 4
2	66.9	70.2	73.2	78 • 0	79.2	11-1	3 • 3
3	67 • 4	70 • 6	73 • 8	78 • 4	79 • 4	11.0	3.2
4	67.9	70.6	74.9	78 • 5	79 • 6	10 • 6	2.7
5	67.1	70 • N	73.9	78 • 1	78 • 1	11.0	2.9
6	66.0	69.6	74.2	77•6	77.6	11.6	3 • 6
7	65 • 1	69.8	74.8	77 • 4	77.4	12.3	4.7
8	66.2	70.8	75.5	78 - 1	78 • 1	11.9	4.6
9	68.9	72.9	76 • 6	80 • 6	80 • 6	11 - 7	4.0
10	73 • 1	76•5	78.9	84.1	85.5	11.0	3 • 4
11	75.2	78 • 4	80.3	86.0	86.0	10.8	3 • 2
12	77.1	80 • 3	81.6	87.5	88.5	10.4	3.2
13	77.4	8Ū•4	81.7	87.5	89.8	10.1	3.0
14	77.8	81.1	81.9	88 • 4	90.8	10.6	3.3
15	76.8	80.2	81.2	88 • 1	90.2	11.3	3,4
16	75•9	79.8	80.9	87 • 7	87.7	11.8	3.9
17	74.7	78 + 7	79•8	86 • 3	87 • 4	11.6	4.0
18	75 • 1	79 • 1	79.8	86.2	86.2	11.1	4.0
OH <b>→</b> 19	75.4	79 • 1	79.6	85•7	85.7	10.3	3 • 7
80	75.8	79.4	80.3	86.0	86.0	10.2	3 ∘ 6
21	75.8	79•6	80 • 7	86 • 1	86•i	10.3	3 • 8
28	75.9	80.0	81 • 4	ხ6∙5	86.5	10 • 6	4.1
23	75 • 4	79 • <b>7</b>	80.9	86•3	86.3	10.9	4 • 3
24	75.0	79.1	80.2	85.7	85 • 7	10.7	4 • 1
25	74.1	78.0	78 • 8	84.7	84.7	10.6	3.9
26	73 • 5	77•3	78 • 1	84•0	84.9	10.5	3 · 8
27	72.0	76.0	77.2	88•6	82.6	10.6	4 • 0
28	<b>7</b> 0 • 5	74•8	76.2	81.5	81.5	11.0	4.3
29	69•3	73 • 8	75 × 4	80 • 6	80.6	11.3	4.5
30	68•9	73 • 5	74.9	80 • 4	80.4	11.5	4.6
31	68.0	72.8	74.2	79•8	79 • 8	11.8	4.8
32	66 • 4	71.1	72.9	78 • 5	<b>78 •</b> 5	12.1	4 • 7
<b>33</b>	64 • 4	69 • 0	71 - 1	77 • 1	77.1	12.7	4.6
34	63.2	67.9	65.8	76 - 1	76 • 1	12.9	4.7

TABLE B-I

### NOISE LEVEL TIME HISTORY DATA

### HUGHES 500 C

OCTOBER 28 1976

### EVENT 108, 150 MPH FLY BY, MIC. 150 METERS EAST

INT	DBA	מפמ	0ASP <b>L</b>	PNL	PNLT	PNL-DBA	DBD-DBA
1	68•9	71.8	76•3	79.2	80+3	10.3	2.9
2	71.2	73 • 4	77.0	80 • 6	81.8	9.4	2.2
3	71.8	74.3	77.5	81.2	81.2	9.4	2.5
4	72.4	75.2	78 • 1	82.2	82.2	9.8	2.8
5	74.7	77.6	79•7	84 • 4	84.4	9.7	2.9
6	77.9	80.7	81.6	87 • 4	88.8	9.5	2.8
7	80 • 2	83.0	83.7	89.6	90.8	9 • 4	2.8
8	82.0	84.3	84.9	91 • 1	91+1	9 • 1	2.3
9	82.3	84.9	85 • 5	91.5	91.5	9.2	2.6
10	81.9	84 • 8	85.5	91-6	91-6	9 • 7	2.9
11	80 • 3	84.0	84.6	91.0	91.0	10.7	3 • 7
12	78•7	82 • 6	83.3	90 • 3	91.4	11.6	3.9
13	77 • 4	81.3	81.8	39.2	89.2	11.8	3.9
14	77.6	81.0	81.6	88.0	89.4	10.4	3 • 4
<i>OH</i> <del>&gt;</del> 15	78.3	81 • 6	82 • 3	88 • 5	89.7	10.2	3.3
16	78•3	81.8	82 • 6	88 • 4	88 • 4	10-1	3.5
17	78.0	81.8	82.7	88 • 6	88.6	10.6	-
18	76.8	80.8	81.9	87.8	87.8	11.0	4.0
19	75.8	79.9	81.0	86.6	86.6	10.8	4 • 1
20	74.6	78 • 6	79.9	85.3	86.8	10.7	4.0
21	74.0	78.0	79 - 3	84.9	86.1	10.9	4.0
22	73 • 1	77.0	78.3	84.1	84.1	11.0	3+9
23	71.4	75.2	76.7	82.4	83-4	11.0	3.8
24	69+3	73.2	75.0	81.0	81.0	11.7	3.9
25	66•6	70 • 7	73.5	79.0	80.1	12.4	4.1

### TABLE 8-I

### NOISE LEVEL TIME HISTORY DATA

Consider the control of the second control o

### HUGHES 500 C

OCTOBER 28 1976

### EVENT 109, 150 MPH FLY BY, MIC. 150 METERS EAST

INT	DВА	DBD	OASPL	PNL	PNLT	PNL-DBA	DBD-DBA
1	62.0	68.2	74•2	75 • 7	75•7	13 • 7	6.2
2	61.7	68+3	74.7	75 • 6	75•6	13.9	6 • 6
3	64.9	69.6	75 • 4	77.0	78 • 1	12.1	4.7
4	71.0	73.9	77.0	81 • 4	82.5	10 • 4	2.9
5	73.6	75.8	78•0	83.2	84.7	9•6	2.2
6	75.5	78 • 1	79.5	84.7	86.2	9.2	2.6
7	76.5	79•4	80 • 4	85•7	86.8	9.2	2.9
8	77.0	80.2	81.3	86 • 6	87.6	9.6	3.2
9	78.0	80.9	81.8	87.4	89.0	9 • 4	2.9
10	80 · <b>7</b>	83.3	83.6	90•0	90.0	9 • 3	2.6
11	81 • 4	84.1	84.4	90.7	90.7	9 • 3	2.7
12	81.5	84.5	84.8	91.4	93.0	9.9	3.0
13	79•8	83.4	83.9	90 • 7	93.0	10.9	3.6
14	78 • 4	82•5	82.9	90 • 1	91.7	11.7	4.1
15	76•7	80•9	81.2	88•3	88•3	11.6	4.2
16	76.2	80.2	80•6	87.0	87.0	10.8	4.0
OH,—→17	76.5	80.2	81.0	86•6	86.6	10 • 1	3 • 7
18	77.1	80•9	81.9	87.1	87.1	10.0	3.8
19	77 • 9	81 • 7	62•5	88.0	88.0	10.1	3 • 5
20	77 <sub>*</sub> 8	81.6	82.6	88 • 1	88 • 1	10.3	3.8
21	77.2	81-0	82.1	87.8	87.8	10.6	3.8
22	75.9	79•6	81.2	86.9	86.9	11.0	3.7
23	74.7	<b>78•</b> 3	79.8	85.5	85•5	10.8	3.6
24	73.2	77.0	78.8	83.8	83.8	10.6	3.8
25	71.9	75.8	77.7	82.7	84.0	10.8	3.9
26	71.0	74.9	76.6	82.0	82.0	11-0	3.9
27	69.3	73.5	75.2	80.7	80.7	11.4	4.2
28	67.3	71 ∘ ខ	73.9	79.5	80.7	12.2	4.5

### TABLE B-IL

### NOISE LEVEL TIME HISTORY DATA

### HUGHES 500 C

OCTOBER 28 1976

### EVENT 110, 130 MPH FLY BY, MIC. 150 METERS EAST

INT	DBA	DBD	OASPL	PNL	PNLT	PNL-DBA	DBD-DBA
1	57 • 8	65•6	71 • 3	73.4	73 • 4	15.6	7.8
2	60 • 2	66.6	71 •8	74.2	74.2	14.0	6 • 4
3	62.0	67.5	72.6	75.5	76.9	13.5	<b>5</b> • 5
4	65.3	69.6	73 • 7	77.5	78•5	12.2	4.3
5	69.0	72.1	75.2	79.6	80.7	10.6	3 • 1
6	70.2	73.2	75•9	80.6	81.7	10.4	3.0
7	71.3	74.0	76 • 4	81.3	81 • 3	10.0	2 • 7
8	72.5	75.2	77.2	88•3	83 • 4	9 • 8	2.7
9	75 • 1	77.2	78•9	84.3	85•3	9.2	2.1
10	76 • 4	78•3	79•8	85.3	87.0	8.9	1 • 9
11	76.5	78 • 4	80•0	85.5	87.1	9.0	1.9
12	75.3	77 • 6	79 • 4	84.6	84.6	9 • 3	2.3
13	74.3	77.0	79•2	83.9	84.9	9.6	2•7 3•0
14	74.5	77.5	79.6	84.8	85.0	10.3	3.4
15	75.6	79.0	80 • 6	86 -3	86•3	10.7	3•4
16	76.9	80 • 3	81 - 4	87.2	87.2	10.3 10.5	3•3
17	77.0	80 • 3	81 - 4	87.5	89•0 89•7	11.0	3 • 4
18	76.6	80.0	81 - 1	87.6		11.5	3.6
19	75.7	79.3	80 • 6	87.2	88•5 86•7	11.5	3.9
50	75 • 2	79 • 1	80 • 2	86.7	87.4	11.0	3.8
21	75.2	79.0	79•7	86.2	87.1	10.9	4.0
53	74.9	78.9	79 • 4	85 • 8	86.0	10.5	3.7
oil <b>→</b> 23	75.5	79•2	79.9	86.0	86.3	10.3	3.6
24	76 • 1	79-7	80 • 4	86.3	86.8	10.2	3 • 4
25	76 • 7	80 • 1	80 • 4	86•8 86•7	86•7	10.3	3.5
26	76 • 4	79.9	80 • 1	85•8	85.8	10.4	3.7
27	75 • 4	79 • 1	79.3		84.4	10.3	3 • 7
28	74 • 1	77.8	78•5	84.4	83 • 3	10.3	3.7
29	72.9	76 • 6	77.8	83.3	84.0	10.4	3.5
30	72 • 3	75•8	77.3	82.7	82.2	11.0	3.5
31	71 • 2	74.7	76.4	82.2	81.7	11.0	3.2
38	70 • 7	73.9	75 • 5	81.7	81.7	11.3	3.5
33	69-1	72.6	74.5	80 • 4	81.7	11.5	3.5
34	68 • 5	72.0	73 • 6	80.0		12.1	3•8
35	67 - 1	70.9	72.6	79.2	79.2	12.2	3.9
36	66 • 4	70 • 3	72.0	78 • 6	79.9	12.4	3.9 4.1
37	65.5	69 • 6	71.5	77.9	77.9	12.4	4.5
38	64 • 1	68 • 4	70•5	76•6	76 • 6	16+3	-1-0

### TRBLE B-IZ.

### NOISE LEVEL TIME HISTORY DATA

#### HUGHES 500 C

STANCE AND ALL

OCTOBER 28 1976

### EVENT 56. 3 DEGREE APPROACH. CENTERLINE MIC. ( HARD SITE )

INT	DBA	DBD	OASPL	PNL	PNLT	PNL-DBA	DBD-DBA
1	67+0	71.8	76.9	79.2	79.2	12.2	4.2
2	66.9	71 - 1	76.7	79-1	79.1	12.2	4.2
3	66 • 4	71.0	77 .4	78 • 6	78 • 6	12.2	4.6
4	67.5	72.1	79.1	79.3	80.5	11.8	4-6
5	69.2	73.5	80 • 1	80.9	82 • 4	11.7	4.3
6	70.5	74.8	80.0	81.9	83 • 4	11.4	4.3
7	70.7	75•1	79 • 4	82.0	53.2	11.3	4.4
8	70 • 4	75.2	80 • 4	81.9	81.9	11.5	4.8
9	69.7	75.0	81 • 1	81.7	82.8	12.0	5.3
10	69•6	74.9	81 - 1	81.7	83.5	12.1	5 • 3
11	69.6	74.9	80•6	82.5	83.9	12.9	5 • 3
12	70.2	75.3	81.0	83•4	83.4	13.2	5 • 1
13	71.0	76.2	81.3	84.3	84.3	13.3	5.2
14	72.2	77.0	31.5	85.1	85 • 1	12.9	4.8
15	74.2	78.9	82 • 6	86.6	86.6	12.4	4.7
16	75 - 1	80.5	83•6	87•7	87.7	12.6	5 • 1
17	75•9	81.0	84.6	88 • 1	88 • 1	12.2	5 • 1
18	76.8	82.0	85•4	89+1	89 • 1	12.3	5.2
19	77.3	85•5	86 • 1	89 • 8	89.8	12.5	4.9
50	<b>77-</b> 8	82 • 4	86.2	90 • 1	90 • 1	12.3	4.6
$OH \rightarrow SI$	77•7	88 • 8	85• <b>7</b>	89.8	89•8	12.1	4.5
22	77.8	82 • S	85•0	89.5	89+5	11.7	4.4
23	77.7	82.3	85•2	89.7	89.7	12.0	4.6
24	77.1	81.8	85•2	89.4	89•4	12.3	4.7
25	76.5	81.4	84.8	89.0	89•0	12.5	4.9
26	75.9	80 • 3	83•6	87.5	87•5	11.6	4.4
27	75.0	79 • 4	82.6	86.4	86 • 4	1:.4	4.4
88	73.9	78 • 4	82.0	85.5	85•5	11.6	4.5
59	72.2	77•2	81.3	84.3	84.3	12.1	5•0
30	71.8	76 • 4	80•4	83.3	83.3	11.5	4.6
31	70 • 4	74.9	79•8	82.0	82•U	11.6	4.5
32	68 • 8	73 • 8	79•6	80 • <b>7</b>	80.7	11.9	5.0
33	66 • 4	72 • 4	<b>78 • 5</b>	79.5	80.9	13 • 1	6•0
34	65 - 1	71 • 4	78•3	78•7	80.2	13.6	6•3
35	63 • 8	70 • 4	77.1	77.9	77•9	14.1	6•6

### TABLE B-Y

### NOISE LEVEL TIME HISTORY DATA

HUGHES 500 C

Kind in the approximation to proper the contraction of the contraction

OCTOBER 28 1976

EVENT 58, 69 MPH FLY BY, CENTERLINE MIC. ( HARD SITE )

INT	DBA	DBD	OASPI.	PNL	PNLT	PNL-DBA	DBD-DBA
1	58 • 9	65.3	72.1	74.4	74.4	15.5	6 • 4
2	61.5	66 • 5	72.2	75.0	76.3	13.5	5.0
3	64 • 1	67.9	72.6	76.5	77.9	12.4	3.8
4	65.5	68 • 8	73.1	77.5	78.9	12.0	3.3
5	66 • 6	69 • 8	73.7	78 • 4	80.0	11.8	3.2
6	68 • 1	71.3	74.6	79 - 6	81.4	11.5	3.2
7	69.8	72.4	75-1	80-8	82.4	11+0	2.5
8	70 • 1	72.8	75 • 4	81 - 1	82.7	11-0	2.7
9	69.4	72.2	75.4	80.8	82.5	11.4	2.8
10	68 • 2	71.7	75.5	80 • 4	82.2	12.2	3.5
11	68 • 2	72.0	75.8	80 • 6	82.0	12-4	3.8
12	68.2	71.9	76.0	80 • 4	80 • 4	12.2	3.7
13	67.7	71.8	76 • 1	80 - 1	81.1	12-4	4.1
14	67 • 4	71.5	76.4	79.5	80.8	12.1	4.1
15	69.9	73.5	77.5	81.0	81.0	11.1	3.6
16	74-1	77.0	79.3	84.0	85.0	9.9	2.9
17	74-1	77.2	79 • 4	84 - 1	85.3	10.0	3.1
18	73.5	77.0	79.3	83-6	85.0	10.1	3.5
19	70.0	75.0	78.3	82.5	85.1	12.5	5.0
20	70 • 3	75.3	78.3	83 • 1	85.8	12.8	5.0
٤١	69.7	74.8	78 - 1	82.8	84.8	13-1	5 • 1
22	69.5	74.6	78 • 4	82.5	83.7	13.0	5 • 1
23	70 -2	75 • 3	79.2	83.3	83.3	13.1	5 • 1
24	71.4	76.5	80.0	84.4	84.4	13.0	5.1
25	72.6	77.6	80.7	85 + 2	85.2	12.6	5.0
26	73.5	78.2	81.0	85.3	85.3	11.8	4.7
27	74.0	78.7	81 - 4	85.8	85.8	11.6	4.7
28	74.6	79.5	81.8	86.7	86.7	12.1	4.9
29	75.0	79.9	82.2	87 • 1	87.1	12.1	4.9
30	75 • <b>7</b>	80.5	82.6	87 • 6	87.6	11.9	4.8
OH 31	76.0	80.7	82.9	87.8	87.8	11.8	4.7
32	75.8	80.5	82.6	87.6	87.6	11.8	4.7
<b>3</b> 3	<b>7</b> 5 • 0	79.7	81.9	86.9	86.9	11.9	4.7
34	73.9	78.6	81.0	86.1	86.1	12.2	4.7
35	73.2	78 - 1	80 • 4	85+8	85.8	12.6	4.9
36	72.6	77.6	79.8	85.1	85.1	12.5	5.0
3 <b>7</b>	72.3	77.0	79.2	84.3	84.3	12.0	4.7
38	71.0	75.6	78.3	82.5	82.5	11.5	4-6
39	69.7	74.1	77.4	81.4	81.4	11.7	4.4
40	67.3	72.0	76 • 1	80.0	80.0	12.7	4.7
41	65 - 5	70.5	74.8	78 • 6	78 • 6	13.1	5.0
42	63.8	68.9	73.6	77.4	77.4	13.6	5 • 1
43	63.7	68.7	73.1	76.7	76.7	13.0	5.0
44	64.4	69.1	73.0	77 - 1	77.1	12.7	4.7
			-	•	<del>-</del>		· ·

TABLE B-V

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### NOISE LEVEL TIME HISTORY DATA

### HUGHES 500 C

OCTOBER 28 1976

EVENT 59, 69 MPH FLY BY, CENTERLINE MIC. ( HARD SITE )

1 1/1	DBA	DBD	OASPL	PNL	PNLT	PNL-DBA	DBD-DBA
1	61 • 7	67 • <b>7</b>	75+4	76+1	77.2	14.4	6.0
2	63 + 8	68.5	75.5	77.2	78.4	13-4	4.7
3	65.2	69.7	76.8	78.2	79.4	13.0	4-5
4	66.2	70.6	77.5	79-1	80.6	12.9	4.4
5	65.9	70.6	77.6	79.0	80.5	13.1	4.7
6	66.2	70.9	76.9	79.4	79 • 4	13.2	4.7
7	68•3	72.3	76.9	80 • 1	80 • 1	11.8	4.0
8	70.3	74.1	77.4	81.43	81.3	11.0	3 • 8
9	71.6	75.2	77.9	82.0	83 • 5	10.4	3.6
10	71.9	75•5	78 • 4	82.0	83.4	10-1	3.6
11	71.7	75.5	78.8	82.0	82.0	10.3	3.8
12	70.9	75.0	79.0	81.8	81.8	10.9	4 • 1
13	70 • 1	74.7	79.2	81 • 4	83.0	11.3	4.6
14	69•3	74.1	78 • 8	81.2	83.2	11.9	4 • 8
15	69.0	74.0	78 • 6	81.8	83.2	12.8	5.0
16	68.9	74.0	78 • 5	82.0	82.0	13.1	5 • 1
17	68 . 9	74+2	78.5	82.4	82-4	13.5	5.3
18	69.6	75.0	79.0	83.0	83.0	13-4	5.4
19	69.9	75•5	79.5	83.5	83.5	13.6	5 • 6
20	70.2	75.9	79.9	84.0	84.0	13-8	5.7
13	72.0	77 - 4	80.7	84.7	84.7	12.7	5 • 4
22	73.6	78•6	81 - 4	85.7	85-7	12.1	5.0
23	75.0	79.6	82•4	87.0	87.0	12.0	4.6
24	75 - 1	79.8	82.7	87.3	87.3	12.2	4.7
25	75 • 4	80.0	82.9	87.4	87.4	12.0	4.6
26	75.7	80.3	83.1	87.5	87.5	11.8	4.6
OH ->27	75.9	80.5	83.4	87.7	87.7	11.8	4.6
28	75.5	80 • 1	83.0	87.5	87.5	12.0	4.6
29	74-3	79.2	82•1	86.7	86.7	12.4	4.9
30	73.2	78.3	80•9	85.9	85.9	12.7	5 - 1
31	72.1	77.6	80 • 2	85.1	85 • 1	13.0	5.5
32	71.5	76.6	79•4	84.1	84.1	12.6	5 • 1
33	70.2	75.2	78 • 4	82.4	82 - 4	12.2	5.0
34	69-4	73.9	77.3	81.2	81.2	11.8	4.5
35	68.7	73.1	76.6	80.5	80.5	11.8	4.4
36	67.8	72.0	75.9	79.6	79.6	11.8	4.2
37	66.4	70 - 7	75.0	78.8	78 • 8	12.4	4.3
38	64.1	69•3	74.3	77.5	77.5	:3.4	5 • 2
39	62 • 8	68 • 4	73.5	76.4	76 • 4	13.6	5 • 6
		67.0	73.4	76.3	76.3	14.3	5.9

#### NOISE LEVEL TIME HISTORY DATA

### HUGHES 500 C

OCTOBER 28 1976

### EVENT 60, 110 MPH FLY BY, CENTERLINE MIC. ( HARD SITE )

# 1/2 SECOND INTEGRATION VS NOISE INDEXES (DB RE 20 MICRO PA)

INT	DBA	DBD	OASPL	PNL	PNLT	PNL-DBA	DBD-DBA
1	64.3	68•6	75.9	77.0	78 • 2	12.7	4.3
2	64.7	63 • 8	75•3	77•3	78•7	12.6	4 • 1
3	65 • 4	69•3	75 • 5	77.7	79.3	12.3	3.9
<u> 4</u>	66 • 1	<b>7</b> 0 ° 0	76.0	77.9	79 • 4	11.3	3.9
5	66 • 7	70•8	76 • 6	78 • 6	78 • 6	11.9	4 • 1
6	66 • 6	70•9	76•7	78 • 8	78 • 8	12.2	4.3
7	66.5	70•8	76+3	78 • 8	78 • 8	12.3	4.3
8	67 • 8	71 • 4	76.2	79.3	80 - 4	11.5	3 • 6
9	68.0	71 • 7	76•7	79•4	80 • 5	11.4	3•7
10	68 • 2	72.0	77 • 4	79.6	79 • 6	11-4	3.8
11	69.4	73 • 3	78 • 0	80.8	80.8	11.4	3.9
12	71.2	75 • 2	78•7	82.5	84.2	11.3	4.0
13	71.8	76 - 1	79•5	83 • 3	85 • 5	11.5	4.3
14	71-1	75•9	79•8	83.2	85.5	12.1	4.8
15	71 -6	76 - 5	80 - 5	83+6	83•6	12.0	4.9
16	72.4	77 - 1	80•9	83.6	84.6	11.2	4.7
17	73.3	77•7	80•9	84•4	84 • 4	11-1	4.4
18	73.5	77 • 8	<b>60-7</b>	84•8	84.8	11.3	4 • 3
19	74.0	78•3	81.0	85.5	85.5	11.5	4.3
20	73.8	78•5	81.9	85•9	85•9	12.1	4.7
81	74 • 3	79•3	8 • 8	86•3	86•3	12.0	5.0
22	74.7	79•7	83 • 5	86 • 9	86.9	12.2	5.0
23	75.3	80 • 1	83•7	87 • 4	87 • 4	12.1	4.8
24	75.9	80 • 4	83•7	87 • 4	87.4	11.5	4.5
OH <del>&gt;</del> 25	75.8	80•2	83.0	87.5	87.5	11-7	4 • 4
26	74.9	79.5	82.0	86•9	86•9	12.0	4.6
27	73.0	77 <b>-</b> 8	80•5	85+3	95•3	12.3	4.8
28	71.5	76 • 1	79•6	83.0	83.0	11.5	4 • 6
29	70.0	74 • 4	79•5	81.7	81.7	11.7	4 • 4
30	68 • 5	72.6	79•3	80•3	80•3	11.8	4 • 1
31	67 • 2	71 • 3	79.2	79•6	80 <b>•6</b>	12.4	4 • 1
32	66 • 1	70 • 4	78•4	78 • 6	80 • 0	12.5	4.3
33	64.7	69.7	77•9	77 • 8	77.8	13.1	5.0
34	62.9	68 • 6	78 • 6	76.9	78.0	14.0	5•7
35	62.0	68-0	78•4	76•2	77.3	14.2	6.0

### NOISE LEVEL TIME HISTORY DATA

### HUGHES 500 C

OCTOBER 28 1976

## EVENT 61, 110 MPH FLY BY, CENTERLINE MIC. ( HARD SITE )

# 1/2 SECOND INTEGRATION VS NOISE INDEXES (DB RE 20 MICRO PA)

INT	DBA	DBD	OASPL	PNL	PNLT	PNL-DBA	DBD-DBA
1	65.3	70.3	76•3	78 • 2	78.2	12.9	5•0
2	65.3	70 • 4	76.3	78.3	78 • 3	13.0	5 • 1
3	65.4	70.3	76.3	78 • 4	78 • 4	13.0	4.9
4	66.4	71.3	76.9	79.0	79.0	12.6	4.9
5	68.3	72.5	77.4	80.3	81.5	12.0	4.2
6	69.6	73.4	78.0	81 • 1	83 • 3	11.5	3.8
7	69.9	74.0	78 • 3	81.4	83+8	11.5	4.1
8	70.2	74.5	78 • 8	81.8	83.7	11.6	4.3
9	71.4	75•9	79.3	83.0	84.2	11.6	4.5
10	72.4	76.9	79 • 5	83.5	85 • 4	11.1	4.5
11	72.7	77.3	79.4	83.6	84.9	10.9	4.6
12	72.8	77 • 4	79.7	84.2	84.2	11.4	4.6
13	73.3	78.0	80 • 4	85.0	85.0	11-7	4 • 7
14	74.1	78•5	81 • 1	86.0	86.0	11.9	4.4
<b>15</b>	74.5	79-1	81.8	86 • 4	87 • 4	11.9	4.6
16	75.6	80.2	82.7	87 • 4	87.4	11.8	4.6
17	76.6	81.3	83.6	88•8	88 • 2	11.6	4.7
OH →18	76.9	81 - 4	83.8	88.3	88.3	11-4	4.5
19	76.0	80•6	83.1	87.8	87.8	11.8	4 - 6
20	74 - 4	79-2	81.6	86.8	86.8	12.4	4.8
21	72.9	77•6	80.0	85 • 2	85 • 2	12.3	4.7
22	71.3	75•9	78 • 6	83 • 1	83 • 1	11.8	4 • 6
23	69•6	74.0	77.6	81.7	81.7	12.1	4.4
24	68 • 1	72.5	76-4	80.3	80.3	12.2	4 • 4
25	67.0	71-4	75•3	79.7	79 • 7	12.7	4.4
26	65 • 5	70 • 1	74.5	78.6	78 • 6	13-1	4.6
27	64 - 1	69.2	74.3	77.3	77.3	13.2	5 • 1
28	63.9	69 • 1	74.2	77 • 4	77 • 4	13.5	5 • 2

### TABLE B-X

### NOISE LEVEL TIME HISTORY DATA

### HUGHES 500 C

OCTOBER 28 1976

EVENT 65. 6 DEGREE APPROACH. CENTERLINE MIC. ( HARD SITE )

# 1/2 SECOND INTEGRATION VS NOISE INDEXES (DB RE 20 MICRO PA)

INT	DBA	DBD	OASPL	PNL	PNLT	PNL-DBA	DBD-DBA
1	65.8	71.6	75.3	79 • 1	79•1	12.3	4.8
2	65.8	71.2	75 • 4	78.6	78 • 6	12.8	5 • 4
3	65.6	71.2	75•4 75•6	78.5	79.5	12.9	5•6
4	68 - 7	73-4	76 • 8	80.7	82.2	12.0	
5	70.8	74.6	77 • 4	82.1	83.5	11.3	3.8
6	72.0	75 • 4	77•4 78•0	82 • 6	82.6	10.6	3 • 4
7	71.8	74.9	77.6	82.1	83 • 3	10.8 10.8 11.3	
8	70.6	73.9	76.8	81.4	83 • 1	10.8	
9	68•9	72.6	76.5	80.2	82 • 3	11.3	2.7
10	68 - 1	72.4	76•7	80.0	82.5	11.9	4+3
11	70 • 1	74.3	77.8	81.4	83 • 1	11.3	4.2
12	72.4	76•5	79 • 1	83.5	83.5	11.9 11.3 11.1	4 • 1
13	73.5	77-7	80 · 4 30 · 6 80 · 6	85.2	85.2	11.7	4.2
14	73.5	77.9	30•6	85.5	86-6	12.0	4.4
15	73•3	77•6	80.6	85.2	85 • 2	11.9	11-3
16	74-1	77.9	80 <b>•7</b>	85.5	85.5	11.4	3 +8
17	74.2	78.3	81.3	85 <b>•7</b>	85.7	11.5	4 • 1
18	74-1	78.4	81.8	85.9	85•9	11.8	4.3
19	73 <b>•</b> 8	<b>7</b> 8•7	82•4	86.0	86.0	12.2	4.9
20	74•7	79.3	82 • 4 83 • 2 84 • 2	86•3	86•3	11.6	
21	77.5	81.6	84.2	88.5	88•5	11.0	4.1
88	77 • 8	82.0	84.5 84.4 84.0	89.1	89•1	11.3	4-2
o <del>// →</del> 23	77 - 7	81.8	84.4	88.9	88•9	11.2	4 • 1
24	76 • 4	80.7	84.0	87.9	87.9	11.5	4•3
25	77 • 4	81.3	84.0	88•6	88•6	11.2	
26	78.0	82.0	84•0 83•9 84•0	89•3	89•3	11.3	4•0
27	78 • 3	82 • 5	84.0	89.5	89•5	11.2	4.2
28	77 • 6	81.9	83.5 82.7 82.1	89•0	89•0	11.4	
29	76.6	81.0	82.7	88•2	88 • 2	11.6	4 • 4
30	75 • 8	80.2	82 • 1	87.0	87.0	11.2	4 • 4
31	77 • 1	81.0	82 - 8	87.6	87.6	10.5	3.9
32	78 • 1	81.7	83•5 83•1	88.7	89 • 8	10.6	3•6
33	77.9	81.2	83 • 1	88.4	86 • 4	10.5	3-3
34	76-1	79.6	81 • 7	86•6	86•6	10.5	
35	73.3	77.1	80 • 0 79 • 5	84.0	84•0	10.7	3 • 8
36	70.9	75 • 4	79.5	82.3	82-3	11.4	4.5
37	69.8	74 • 3	79•3 78•9 77•6	81.2	82 • 4	11.4	
<b>3</b> 8	69.3	73.9	78.9	80.6	82•5 81•9	11.3	4 • 6
39	68.7	73 - 1	77•6	79.9	81 • 9	11.2	4 • 4
40	67 • 1	71.8 70.3	76.9		80•3		4.7
41	65•2	70·3	76 • 3	78.2	79•2	13.0	5 • 1

TABLE 8-I

### NOISE LEVEL TIME HISTORY DATA

HUGHES 500 C

OCTOBER 28 1976

### EVENT 83. 9 DEGREE APPROACH. CENTERLINE MIC. ( HARD SITE )

# 1/2 SECOND INTEGRATION VS NOISE INDEXES (DB RE 20 MICRO PA)

INT	DBA	DBD	0ASPL	PNL	PNLT	PNL-DBA	DBD-DBA
1	65 • 4	71.5	75•4	78 • 7	80•9	13.3	6 • 1
2	65.9	71.7	75.7	79.0	80.7	13-1	5•8
3	66.9	72.4	76.5	80 • 1	81.2	13.2	5.5
4	67.8	73.2	77 • 1	81 -0	81.0	13.2	5.4
5	68.9	74.2	77.8	81.8	31.8	12.9	5.3
6	70.7	75.7	78 • 4	82.9	82.9	12.2	5.0
7	72.1	76 • 7	79.2	83.9	83.9	11.8	4.6
8	72.4	76.9	79•7	84.3	84.3	11.9	4.5
9	73 - 1	77.6	80 • 6	85.0	85•0	11.9	4.5
10	74.0	78.5	81.7	85•9	85•9	11.9	4.5
11	74.5	79.1	82.5	86.6	87.8	12.1	4-6
12	75 • 1	79.9	83.3	87.2	88•5	12.1	4.8
13	76•4	81.0	84.2	87.8	87.8	11.4	4.6
14	77 • 6	81.8	84.8	88•9	88•9	11.3	4.2
15	77.9	82.2	85•2	89 • 2	89.2	11.3	4.3
16	78•0	82.3	85 • 1	89 • 2	89.2	11.2	4.3
OH —→17	77•9	82 • 3	85 • 0	89•2	89.2	11.3	4.4
18	78•2	82.5	84.8	89•5	89 • 5	11.3	4.3
19	78•3	82•7	84•5	89•8	89.8	11.5	4.4
20	78-3	82•8	84.1	90 • 1	90.1	11.8	4.5
51	77•7	82 • 1	83 • 1	89 • 2	89.2	11.5	4.4
22	76 • 6	80 • 8	82.0	87 • 6	87.6	11.0	4.2
23	75•0	79.2	80 <b>•7</b>	86+0	86.0	11.0	4.2
24	73.8	77.9	79•8	84.9	84.9	11.1	4-1
25	72•3	76.7	79•3	83.9	83.9	11.6	4 = 4
86	70•9	75 • 4	78•5	82•6	82.6	11.7	4.5
27	69 • 4	74.2	77.6	81 • 3	81.3	11.9	4.8
28	68•2	72.9	76.4	80.2	81-4	12.0	4.7
29	66•6	71.6	76.0	79.0	80.3	12.4	5.0
30	64 • 8	70.5	76•3	78 • 4	78 • 4	13.6	5.7
31	64 • 1	70.2	77 • 1	78 • 1	78.1	14.0	6 • 1

### TABLE 8-1

### NOISE LEVEL TIME HISTORY DATA

HUGHES 500 C

OCTOBER 28 1976

EVENT 104, 130 MPH FLY BY, CENTERLINE MIC. ( HARD SITE )

# 1/2 SECOND INTEGRATION VS NOISE INDEXES (DB RE 20 MICRO PA)

INT	DBA	DBD	OASPL	PNL	PNLT	PNL-DBA	DBU-DBA
1	56 • 4	65 • 4	68.7	72.6	72.6	16.2	9•0
2	57 • 6	66.0	69.5	72.9	72.9	15.3	8 • 4
3	60.0	67.0	70.6	74.3	75.3	14.3	7•0
4	62.9	68.3	71.8	75.8	76.9	12.9	5 • 4
5	63.5	68.7	72.6	76 - 1	77.2	12.6	5•4 5•2
6	62.7	68.6	73.0	75.7	75.7	13.0	
7	60 • 7	68 • 2	73.6	75.2	75.2	14.5	5•9 7•5
8	63.7	69.3	74.2	77.0	77.0	13.3	7 • 5 5 • 6
9	66.3	71 • 1	75.0	78 • 5	78.5	12.2	4.8
10	68 • 6	72.7	75.7	79.8	79-8	11.2	4.0
11	70.7	74.0	76.4	81 • 1	81 • 1	10-4	3 • 3
12	72.6	75.7	77.7	82.7	82.7	10 • 1	3.1
13	72.5	75.7	77.9	82.7	82.7	10.2	3•1
14	71 - 4	75 • 1	77.8	82.4	82 • 4	11.0	3•2
15	68 • 7	73.3	76.8	81.3	82.6	12.6	4.6
16	69.9	74.6	77.3	82.3	84.7	12.4	4.7
17	70.9	75.3	77.5	83.0	85.4	12.1	4.4
18	71 • 1	75 • 4	77.5	83.1	85.3	12.0	4 • 4
19	70.7	75•3	77.4	82.9	84.3	12.2	-
20	71.7	76.0	78.0	83 • 6	85 • 1	11.9	4•6 4•3
21	72.4	76.6	78.4	83.7	85.4	11.3	4.2
22	72.2	76.3	78.2	83.0	84.3	10.8	4.1
23	70.9	75.4	77.7	82.0	82.0	11.1	4•1
24	70.5	75.0	77.3	81.9	81.9	11.4	4.5
25	<b>7</b> 0•7	75 • 1	77.5	82.3	82.3	11.6	4.4
26	71.4	75.9	78.0	83.2	83.2	11.8	4.5
27	71.9	76.5	78.5	83 • 7	83.7	11.8	4.5
28	72.5	76.9	78.8	83 • 8	83.8	11.3	4 • 4
29	72 • 4	76.8	78.9	83 • 6	83.6	11.2	4 • 4
30	72.8	77 • 1	79.5	84.1	84.1	11.3	4.3
31	72.8	77.0	79.7	83.8	83.8	11.0	4.3
<b>0</b> H → 32	73 • 1	77.3	79.9	84.6	84.6	11.5	4•2
33	73 • 1	77.3	79.8	85.0	85.0	11.9	4.2
34	72.9	77.3	79.4	84.8	84.8	11.9	4.4
35	72.2	76 • 7	78.8	84.0	84.0	11.8	4.5
36	71.0	75•7	77.6	83.3	83.3	12.3	4.7
37	69.7	74.6	76.3	82.2	82.2	12.5	4.9
38	68•8	73.5	74.8	80.8	80.8	12.0	4.7
39	67.9	72.5	73.8	79.5	79.5	11.6	4.6
40	67 • 1	71.5	72.7	78.8	78 • 8	11.7	4.4
41	65 • 8	70 • 4	71.5	77.9	77.9	12.1	4 • 6
42	64-1	69.2	69.8	77.2	77.2	13.1	5 • 1
43	63.2	68 • 6	69.0	76.8	76.8	13.6	5 • 4
44	61.6	67.8	68•2	75.7	75.7	14.1	6•2
		_	_			<b>→</b> ¬□ <b>▼ ≜</b>	U + E

### NOISE LEVEL TIME HISTORY DATA

HUGHES 500 C

OCTOBER 28 1976

### EVENT 105, 130 MPH FLY BY, CENTERLINE MIC. ( HARD SITE )

# 1/2 SECOND INTEGRATION VS NOISE INDEXES (DB RE 20 MICRO PA)

INT	DBA	DBD	OASPL	PNL	PNLT	PNL~DBA	DBD-DBA
1	59+9	57.6	71 • 7	74.8	74.8	14-9	7.7
S	61.5	68.3	72.0	75.9	75.9	14.4	6.8
3	62 • 5	68.8	72.4	76 • 4	76.4	13.9	6.3
4	62 • 8	69.0	72.8	76.7	76.7	13.9	6.2
5	64 • 1	69.8	73.3	77.5	77.5	13.4	5.7
6	64.5	70.1	73.7	77.9	77.9	13.4	5•6
7	65 • 4	70.6	74.2	78.3	78.3	12.9	
8	66 • 9	71.6	74.9	79 • 1	79.1	12.2	5•2 4•7
9	68 • 5	72.7	75.7	80.2	80 .2	11.7	4.2
10	70.3	74.1	76.4	81.5	82.7	11.2	3.8
11	70 • 2	74-1	76.3	81.6	83.4	11.4	3.9
12	69.5	73 • 7	76.2	81.3	83.4	11.8	4.2
13	70 • 3	74.5	76.8	82.3	83.3	12.0	4.2
14	72.3	76.3	78.0	83.9	83.9	11.6	
15	72.9	76.9	78 • 3	84.2	85.6	11.3	4.0
16	72.0	76 - 4	77.9	83.5	85.6	11.5	4.0
17	70.4	75.4	77.4	82.0	83.9	11.6	4.4
16	70.4	75.5	77 • 7	82.5	82.5	12.1	5.0
19	71.2	76.0	78.2	83.1	83 • 1	11.9	5 • 1
20	72.0	76.3	78 • 4	83.3	83.3	11.9	4.8
21	71.5	75.8	77.8	85.9	82.9	11.4	4 • 3
55	71.0	75 • 5	77.5	83.0	83.0		4 • 3
23	71.3	75.8	77 • 8	83.2	84 • 4	12.0	4+5
24	71.9	76.2	78•2	83 • 3	83 • 3	11•9 11•4	4 = 5
25	72.5	76.7	78 • 5	83.5	83.5	11.4	43 • 3
26	72.3	76.7	78.9	83.8	83.8	11.5	4.2
27	72.3	76.7	79.2	83.6	83.6	11.3	4 • 4
28	72.0	76.2	79.2	83.7	83.7	11.7	4.4
oH -→ 29	72.8	76.7	79.5	84.5	84.5	11.7	4.2
30	73.2	77.3	79.8	85.0	85.0	11.8	3.9
31	72.9	77.4	79.6	84.7	84.7	11.8	4 • 1
32	72 • 1	76.9	78.9	84.1	84.1	12.0	4.5
33	71.0	76.0	77.8	83 • 4	83.4	12.4	4 - 8
34	70.2	75.3	76.9	82.6	82.6	12.4	5•0
35	68.8	73.9	75.4	81.1	81.1	12.4	5 • 1
36	67.7	72.7	74.1	79.9	79.9	12.2	5 • 1
37	66 + 1	71.0	72.6	78 • B	78 • 8	12.2	<b>5.</b> 0
38	64.9	69.9	71.5	77.7	77.7	12.8	4.9
39	64.3	69.3	7C • 7	77.8	77 · B		5.0
40	64.5	69.3	70.5	77.8	77.8	13.5	5•0
41	64 • 4	69.5	70.5	77.5	77.5	13.3	4.8
42	63 • 4	68+9	69.7	76.0	76.0	13.1	5 • 1
43	61.6	68.0	68.9	75 • 2	76.2	12.6	5•5
44	59-3	66.7	67.7	74.0	75•2	13.6	6 • 4
-	<b>*</b>		<b>∵</b> ;	1 -4 * U	13.4	14.7	7 • 4

### NOISE LEVEL TIME HISTORY DATA

### HUGHES 500 C

OCTOBER 28 1976

EVENT 106. 144 MPH FLY BY. CENTERLINE MIC. ( HARD SITE )

# 1/2 SECOND INTEGRATION US NOISE INDEXES (DB RE 20 MICRO PA)

$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	INI	DBA	DBD	OASPL	PNL	PNLT	PNL=DDA	DBD-DBA
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	=	64.9	69.4	74.1	<b>7</b> 5•8	75.8	10.9	4.5
$\begin{array}{cccccccccccccccccccccccccccccccccccc$		66•2	70.5	75.2	76.8			
4 69.9 73.5 77.4 60.0 81.1 10.1 3.6 5 71.1 74.6 78.2 80.9 80.9 9.8 3.5 6 70.9 74.5 78.4 80.7 80.7 9.8 3.6 7 70.1 74.6 78.2 80.9 80.9 9.8 3.5 6 70.9 74.5 78.4 80.7 80.7 9.8 3.6 7 70.1 74.2 78.6 80.2 80.2 10.1 4.1 8 69.3 73.7 78.8 79.6 80.6 10.3 4.4 9 69.6 74.0 79.3 80.2 81.4 10.6 4.4 10.6 70.9 74.9 79.6 81.4 81.4 10.5 4.0 11 72.3 76.1 80.4 82.7 82.7 10.4 3.8 12 74.2 78.0 81.8 84.4 84.4 10.2 3.8 13 74.9 78.9 82.6 85.3 85.3 10.4 4.0 14 75.4 79.6 83.4 86.4 86.4 11.0 4.2 15 75.4 79.5 83.5 86.8 87.9 11.4 4.1 16 76.6 80.5 84.0 87.5 87.5 10.9 3.9 11.4 4.1 18 77.3 81.6 84.6 88.3 88.3 11.0 4.3 19 77.7 82.2 85.1 89.3 88.3 11.0 4.3 19 77.7 82.2 85.1 89.3 89.3 11.6 4.5 20 78.3 82.8 85.3 90.2 90.2 11.9 4.5 21 79.1 83.4 85.7 91.2 91.2 12.1 4.3 22 79.0 83.5 85.6 90.9 90.9 11.9 4.5 23 78.6 83.1 85.0 90.4 90.4 11.8 4.5 24 77.3 81.8 83.5 89.3 89.3 12.0 4.5 25 75.4 79.5 81.0 87.2 87.2 11.8 4.1 22 79.0 83.5 85.6 90.9 90.9 11.9 4.5 22 79.0 83.5 85.6 90.9 90.9 11.9 4.5 23 78.6 83.1 85.0 90.4 90.4 11.8 4.5 24 77.3 81.8 83.5 89.3 89.3 12.0 4.5 25 75.4 79.5 81.0 87.2 87.2 11.8 4.1 22 79.0 83.5 85.6 90.9 90.9 11.9 4.5 25 75.4 79.5 81.0 87.2 87.2 11.8 4.1 22 79.0 83.5 85.6 90.9 90.9 11.9 4.5 25 75.4 79.5 81.0 87.2 87.2 11.8 4.1 22 79.0 83.5 85.6 90.9 90.4 91.4 11.8 4.5 24 77.3 81.8 83.5 89.3 89.3 12.0 4.5 25 75.4 79.5 81.0 87.2 87.2 11.8 4.1 22 79.0 83.5 85.6 90.9 90.4 90.4 11.8 4.5 24 77.3 81.8 83.5 89.3 89.3 12.0 4.5 25 75.4 79.5 81.0 87.2 87.2 11.8 4.1 22 79.0 83.5 85.6 90.9 90.4 90.4 11.8 4.5 25 75.4 79.5 81.0 87.2 87.2 11.8 4.1 29 68.0 72.4 74.1 79.4 79.4 79.4 11.4 4.4 4.1 29 68.0 72.4 74.1 79.4 79.4 79.4 11.4 4.4 4.1 29 68.0 72.4 74.1 79.4 79.4 79.4 11.4 4.4 4.1 29 68.0 72.4 74.1 79.4 79.4 79.4 11.4 4.4 4.1 29 68.0 72.4 74.1 79.4 79.4 79.4 11.4 4.4 4.1 4.4 4.1 29 68.0 72.4 74.1 79.4 79.4 79.4 11.4 4.4 4.5 30 66.5 71.0 73.3 77.9 77.9 77.9 11.4 4.5	3	67•9	72.1	76.3	78 • 6			
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	-	69.3	73.5	77 • 4	60.0			
6 70.9 74.5 78.4 80.7 80.7 9.8 3.6 7 70.1 74.2 78.6 80.2 80.2 10.1 4.1 8 69.3 73.7 78.8 79.6 80.6 10.3 4.4 9 69.6 74.0 79.3 80.2 81.4 10.6 4.4 10 70.9 74.9 79.6 81.4 81.4 10.5 4.0 11 72.3 76.1 80.4 82.7 82.7 10.4 3.8 12 74.2 78.0 81.8 84.4 84.4 10.2 3.8 13 74.9 78.9 82.6 85.3 85.3 10.4 4.0 14 75.4 79.6 83.4 86.4 86.4 11.0 4.2 15 75.4 79.5 83.5 86.8 87.9 11.4 4.1 16 76.6 80.5 84.0 87.5 87.5 10.9 3.9 17 76.8 80.9 84.3 87.2 67.2 10.4 4.1 18 77.3 81.6 84.6 88.3 88.3 11.0 4.3 19 77.7 82.2 85.1 89.3 89.3 11.6 4.5 20 78.3 82.8 85.3 90.2 90.2 11.9 4.5 21 79.1 83.4 85.7 91.2 91.2 12.1 4.3 22 79.0 83.5 85.6 90.9 90.9 11.9 4.5 23 78.6 83.1 85.0 90.4 90.4 11.8 4.5 23 78.6 83.1 85.0 90.4 90.4 11.8 4.5 25 75.4 79.5 81.0 87.2 87.2 11.8 4.5 25 75.4 79.5 83.5 86.6 84.6 64.6 11.3 3.9 27 71.1 75.1 76.4 82.9 82.9 11.8 4.0 28 69.9 74.0 75.3 81.3 81.3 11.0 4.5 29 66.0 72.4 74.1 79.4 79.4 11.4 4.1 29 66.0 72.4 74.1 79.4 79.4 11.4 4.4 30 66.5 71.0 73.3 77.9 77.9 11.4 4.4 30 66.5 71.0 73.3 77.9 77.9 11.4 4.4 4.4 30 66.5 71.0 73.3 77.9 77.9 11.4 4.4 4.4 30 66.5 71.0 73.3 77.9 77.9 11.4 4.4 5.5		71 - 1	74.6					
$\begin{array}{cccccccccccccccccccccccccccccccccccc$		70.9	74.5	78.4				
8 69·3 73·7 78·8 79·6 80·6 10·3 4·4 9 69·6 74·0 79·3 80·2 81·4 10·6 4·4 10 70·9 74·9 79·6 81·4 81·4 10·5 4·0 11 72·3 76·1 80·4 82·7 82·7 10·4 3·8 12 74·2 78·0 81·8 84·4 84·4 10·2 3·8 13 74·9 78·9 82·6 85·3 85·3 10·4 4·0 14 75·4 79·6 83·4 86·4 86·4 11·0 4·2 15 75·4 79·5 83·5 86·8 87·9 11·4 4·1 16 76·6 80·5 84·0 87·5 87·5 10·9 3·9 17 76·8 80·9 84·3 87·2 87·2 10·4 4·1 18 77·3 81·6 84·6 88·3 88·3 11·0 4·3 19 77·7 82·2 85·1 89·3 89·3 11·6 4·5 20 78·3 82·8 85·3 90·2 90·2 11·9 4·5 21 79·1 83·4 85·7 91·2 91·2 12·1 4·3 22 79·0 83·5 85·6 90·9 90·9 11·9 4·5 23 78·6 83·1 85·0 90·4 90·4 11·8 4·5 24 77·3 81·6 83·5 89·3 89·3 12·0 4·5 25 75·4 79·5 81·0 87·2 87·2 11·8 4·1 26 73·3 77·2 78·6 84·6 84·6 11·3 3·9 27 71·1 75·1 76·4 82·9 82·9 11·8 4·1 29 68·0 72·4 74·1 79·4 79·4 11·4 4·4 30 66·5 71·0 73·3 77·9 77·9 11·4 4·4		70 - 1	74.2	78•6				
$\begin{array}{cccccccccccccccccccccccccccccccccccc$		69.3	73.7	78 • 8				
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	-	69.6	74°Q	79.3	80.2			
11	10	70.9	74.9	79.6	81.4			
12 74.2 78.0 81.8 84.4 84.4 10.2 3.8 13 74.9 78.9 82.6 85.3 85.3 10.4 4.0 14 75.4 79.6 83.4 86.4 86.4 11.0 4.2 15 75.4 79.5 83.5 86.8 87.9 11.4 4.1 16 76.6 80.5 84.0 87.5 87.5 10.9 3.9 17 76.8 80.9 84.3 87.2 87.2 10.4 4.1 18 77.3 81.6 84.6 88.3 88.3 11.0 4.3 19 77.7 82.2 85.1 89.3 89.3 11.6 4.5 20 78.3 82.8 85.3 90.2 90.2 11.9 4.5 21 79.1 83.4 85.7 91.2 91.2 12.1 4.3 22 79.0 83.5 85.6 90.9 90.9 11.9 4.5 23 78.6 83.1 85.0 90.4 90.4 11.8 4.5 24 77.3 81.6 83.5 89.3 89.3 12.0 4.5 25 75.4 79.5 81.0 87.2 87.2 11.8 4.1 26 73.3 77.2 78.6 84.6 84.6 84.6 84.6 11.3 3.9 27 71.1 75.1 76.4 82.9 82.9 11.8 4.0 28 69.9 74.0 75.3 81.3 81.3 81.3 11.4 4.1 29 63.0 72.4 74.1 79.4 79.4 11.4 4.4 30 66.5 71.0 73.3 77.9 77.9 11.4 4.5		72.3	76.1	80 • 4				
13	12	74.2	78.0	81.8				
14	13	74.9	78.9	82.6				
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	14	75 • 4	79.6					
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	15	75 • 4	79.5	83.5	86.8			
$\begin{array}{cccccccccccccccccccccccccccccccccccc$		76.6	80 • 5	84.0				
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	17	<b>7</b>	80.9	84.3				
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	18	77 • 3	81.6	84.6				
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	19	77.7	82.2					. –
$\begin{array}{cccccccccccccccccccccccccccccccccccc$		78 • 3	82.8	85.3				
22       79.0       83.5       85.6       90.9       90.9       11.9       4.5         23       78.6       83.1       85.0       90.4       90.4       11.8       4.5         24       77.3       81.6       83.5       89.3       89.3       12.0       4.5         25       75.4       79.5       81.0       87.2       87.2       11.8       4.1         26       73.3       77.2       78.6       84.6       64.6       11.3       3.9         27       71.1       75.1       76.4       82.9       82.9       11.8       4.0         28       69.9       74.0       75.3       81.3       81.3       11.4       4.1         29       63.0       72.4       74.1       79.4       79.4       11.4       4.4         30       66.5       71.0       73.3       77.9       77.9       11.4       4.5	04 <del>-&gt;</del> 21	79.1	83•4	85.7				
23	22	79.0	83.5					
24       77.3       81.6       83.5       89.3       89.3       12.0       4.5         25       75.4       79.5       81.0       87.2       87.2       11.8       4.1         26       73.3       77.2       78.6       84.6       84.6       11.3       3.9         27       71.1       75.1       76.4       82.9       82.9       11.8       4.0         28       69.9       74.0       75.3       81.3       81.3       11.4       4.1         29       68.0       72.4       74.1       79.4       79.4       11.4       4.4         30       66.5       71.0       73.3       77.9       77.9       11.4       4.5	23	78.6	83 • 1					_
25	24	77.3	81.8	83.5	89.3			
26 73·3 77·2 78·6 84·6 84·6 11·3 3·9 27 71·1 75·1 76·4 82·9 82·9 11·8 4·0 28 69·9 74·0 75·3 81·3 81·3 11·4 4·1 29 68·0 72·4 74·1 79·4 79·4 11·4 4·4 30 66·5 71·0 73·3 77·9 77·9 11·4 4·5	25	75.4						
27 71·1 75·1 76·4 82·9 82·9 11·8 4·0 28 69·9 74·0 75·3 81·3 81·3 11·4 4·1 29 66·0 72·4 74·1 79·4 79·4 11·4 4·4 30 66·5 71·0 73·3 77·9 77·9 11·4 4·5	56	73.3	77.2					
28 69.9 74.0 75.3 81.3 81.3 11.4 4.1 29 68.0 72.4 74.1 79.4 79.4 11.4 4.4 30 66.5 71.0 73.3 77.9 77.9 11.4 4.5	27	71 • 1	75 • 1					
29 68.0 72.4 74.1 79.4 79.4 11.4 4.4 30 66.5 71.0 73.3 77.9 77.9 11.4 4.5	នន	69.9						
30 66.5 71.0 73.3 77.9 77.9 11.4 4.5	29							
21 65 1 60 6 70 1	30							
	31							

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### TABLE 8-V

#### NOISE LEVEL TIME HISTORY DATA

### HUGHES 500 C

OCTOBER 28 1976

### EVENT 107. 144 MPH FLY BY. CENTERLINE MIC. ( HARD SITE )

# 1/2 SECOND INTEGRATION VS NOISE INDEXES (DB RE 20 MICRO PA)

INT	DBA	DBD	OASPL	PNL	PNLT	PNL-DBA	DBD-DBA
1	66 • 4	70.7	74.0	77.9	80 • 6	11.5	4.3
2	66 • 1	<b>70∙</b> €	74.3	78.0	81.0	11.9	4.7
3	65•9	70-9	74.7	77.8	80 • 3	11.9	5.0
4	68.2	72.0	75+5	79.1	79 • 1	10.9	3+3
5	6୫∙୫	72.2	75.9	79.7	79.7	10.9	3 • 4
6	68.8	72.1	76 - 1	79.8	79•8	11.0	3.3
7	68•9	72.5	76.4	80.0	80.0	11.1	3 • 6
8	69.2	73 • 1	77.2	80.5	80.5	11.3	3•9
9	70 • 2	74 • 1	78.0	81 • <b>1</b>	81.1	10.9	3•9
10	71.7	75.6	79 • 1	82.5	82.5	10.8	3 • 9
11	73 • 5	77 + 2	79•9	83.7	83.7	10.2	3 • 7
18	74,2	78.0	80•6	84.9	84.9	10.7	3•8
13	74.7	78•6	81.2	85.8	87.4	11-1	3.9
1.4	74.7	78•9	81.7	86.5	83 • 4	11.48	4.2
15	<b>7</b> 5•3	80.0	82.3	87.3	87.3	12.0	4.7
16	75.8	80 • 4	82∙5	87.3	88.4	11.5	4.6
1.7	76.3	80 • 6	88.8	86•9	86.9	10.6	4.3
18	76-3	80-4	82.8	87.3	87.3	11.0	4.1
19	76.5	80 + 8	83.1	88.0	88•0	11.5	4.3
20	76.8	81.4	83.5	38 • 4	38 - 4	11.6	4.6
OH—→21	77 • 3	81.7	83.8	89•0	89.0	11.7	4.4
22	77 - 4	81.8	84.3	89•3	89.3	11.9	4.4
23	77.7	81.9	84.5	89.4	89.4	11-7	4.2
84	77.3	81 . 6	83•9	89•0	89.0	11.7	4.3
25	76 • 6	80.7	82.5	88•1	88.1	1105	4.1
26	75.0	792	80 • 4	86.5	86.5	11.5	4.2
27	73.2	77 - 1	78.4	84.4	84•4	11.2	3•9
28	71.2	75 • 1	76.2	82 • 7	82.7	11.5	3 • 9
29	70 • 3	74-4	75 • 7	85 • 3	82.3	18.0	4 - 1
30	69.3	73.7	75 • 1	81.5	81.5	12.2	4 - 4
31	67+6	72 • 7	74.2	79.8	<b>79.</b> 8	12.2	5+1
32	65.5	70 • 9	72 • 5	78 • 5	79.8	13.0	5 • 4
33	64.4	70 • 1	71.8	77.3	77.3	18.9	5.7
34	64.2	69 • 8	71.5	77.0	77.0	12.8	5.6

### NOISE LEVEL TIME HISTORY DATA

### HUGHES 500 C

OCTOBER 28 1976

### EVENT 108, 150 MPH FLY BY, CENTERLINE MIC. ( HARD SITE )

# 1/2 SECOND INTEGRATION VS NOISE INDEXES (DB RE 20 MICRO PA)

INT	DBA	DBD	OASPL	PNL	PNLT	PNL-DBA	DBD-DBA
1	69.9	73.3	77 • 1	80 • 5	81.8	10.6	3 • 4
5	70 - 1	73.5	77.2	E0.7	82.0	10 • 6	3 • 4
3	70 - 1	73.7	77•5	80.9	82-1	10.8	3.6
l'é	70 • 7	74.5	78.0	81.0	81.0	10.3	3.8
5	72.2	75.2	78•5	81.9	81.9	9•7	3.0
6	72•7	75.5	78•9	82.4	82.4	9.7	2.8
7	72 • 3	75.3	78 • 8	82.8	82.2	9.9	3.0
3	71 - 7	75.3	79 • 1	82.0	82.0	10.3	3 • 6
9	72•0	75.7	79 • 4	82.2	82.2	10+2	3.7
10	72•7	76 • 1	79•9	83.0	83.0	10.3	3 • 4
11	73.2	76.9	80 <b>.7</b>	83.7	83.7	10.5	3 • 7
12	73 • 4	77•2	81 • 4	84.2	84.2	10.8	3.8
13	74.6	78 • 5	82• <b>3</b>	85.2	85.2	10.6	3.9
§ 4	75•7	79.8	83 • 2	86.7	86.7	11.0	4 - 1
15	76•6	80.9	84.2	86.2	89.5	11.6	4.3
16	77.1	81.5	84.8	89.0	89.0	11.9	4.5
17	78•0	82.4	85-4	89.4	89.4	11-4	4.4
18	78 • 8	83.5	86 • 1	89.9	89.9	11-1	4.7
19	79 • 4	84.0	86•6	90 ∙8	90.8	11.4	4.6
\$0	79•7	84.6	86•8	91.5	91.5	11.8	4.9
21	80.1	84.9	87•G	92 • 7	92.7	12.6	4.8
0H ->55	80 <b>•7</b>	85.3	87.2	93.0	93.0	12.3	4.6
23	80 • 3	84.6	86•7	92.2	92.2	11.9	4.3
24	79•5	83.7	85•3	90•9	90•9	11-4	4.2
25	77.4	81.8	83.0	88 • 6	88.6	11.2	4 • 4
26	75•7	79•9	80 <b>•7</b>	86•8	86.8	11.1	4.2
27	73 • 1	77.4	78 • 6	84.5	84.5	11.4	4.3
28	71 - 1	75•5	77 • 1	82 • 6	82.6	11.5	4 • 4
29	68 • 8	73.8	75 • 7	80.9	80•9	12.1	5•0
30	66•4	71.6	74.3	78 <b>-</b> 8	78 • 8	12.4	5.2
31	64.7	70.3	73.3	77.5	77.5	12.8	5.6

## TABLE 8-I

### NOISE LEVEL TIME HISTORY DATA

### HUGHES 500 C

OCTOBER 28 1976

### EVENT 109. 150 MPH FLY BY. CENTERLINE MIC. ( HARD SITE )

# 1/2 SECOND INTEGRATION VS NOISE INDEXES (DB RE 20 MICRO PA)

INT	DBA	DBD	OASPL	PNL	PNLT	PNL-DBA	DBD-DBA
1	66.2	72.5	74.3	80 • 3	81 • 4	14+1	6•3
2	66.8	72.6	74.7	80 • 4	81.6	13.6	5 · B
3	66.5	71.9	74.3	79.9	81.0	13.4	5.4
4	69.1	72.2	74.4	79 • 8	81.0	10.7	3 • 1
5	70.2	72,8	74.8	80.0	81.3	9 • 8	2.6
6	70.4	73.3	75.3	80 • 3	81.6	9.9	2.9
7	69 • Ü	72.8	75.0	79.9	79+9	10-9	3-8
8	69 • 4	72.7	75.0	79.8	80.9	10.4	3.3
9	70.3	72.7	<b>75•</b> 8	80 • 3	81.5	10.0	2.4
10	71.2	73.4	77.0	80.8	81.8	9 • 6	2.2
11	70.7	73.5	77.7	80 • 6	80.6	9.9	2.8
12	70.9	73.8	78.0	80 • 9	82.2	10.0	2.9
13	70 • 6	73.9	78 • 4	80.7	80.7	10-1	3.3
14	70 • 7	74.2	78 · 8	81.4	81.4	10.7	3.5
15	70.9	74.7	79.3	81.9	81.9	11-0	3 • 6
16	71 • 8	75.6	79·8	82.5	82.5	10.7	3 • 8
17	72.8	76.7	80.4	83.2	83.2	10.4	3.9
18	73 • 6	77.5	80.9	84.1	84 - 1	10.5	3.9
19	74.2	78.2	81.4	85.0	85 • 0	10.8	4.0
20	74.4	78 • 6	81.8	85.7	87.1	11-3	4.2
21	75•5	80.0	82.8	87.2	88.3	11.7	4.5
22	76•7	81 - 1	63.9	88 • 4	88.4	11.7	4.4
23	78 • 1	82.6	85.0	89.1	89.1	11.0	4.5
24	78•9	83 • 1	85.3	89.5	89.5	10.6	4.2
25	79•2	83 • 3	85•3	89.9	89.9	10.7	4 • 1
26	79-1	82.9	84.9	89.8	89.8	10.7	3 • 8
27	79.0	82.9	84.8	90 • 4	90 - 4	11.4	3.9
OH> 28	79.4	83•3	85.0	90.8	90 • 8	11.4	3.9
29	79•5	83.5	85.3	90.7	90.7	11.2	4.0
30	78.8	82.9	84.8	90.3	90.3	11.5	4 • 1
31	78.0	88 • 1	83.8	89.1	89.1	11-1	4 - 1
32	76.6	80.8	82.1	87.6	87.6	11.0	4.2
33	75.2	79.2	80.1	85.9	85.9	10.7	4.0
34	72.6	76.7	77.7	83.7	83.7	11 - 1	4.1
35	70.8	75.0	76 • 1	82.3	82.3	11.5	4.2
36	69.0	73.5	74.7	80.8	80.8	11.8	4.5
37	67.6	72.3	73.9	79.7	79.7	12.1	4.7
38	66.8	71.5	73.4	79 - 1	80.5	12.3	4.7
39	65.7	70 • 7	72.5	78.2	78.2	12.5	5.0

#### NOISE LEVEL TIME HISTORY DATA

#### HUGHES 500 C

**OCTOBER 28 1976** 

#### EVENT 110, 130 MPH FLY BY, CENTERLINE MIC. ( HARD SITE )

## 1/2 SECOND INTEGRATION VS NOISE INDEXES (DB RE 20 MICRO PA)

INT	DBA	DBD	0ASPL	PNL	PNLT	PNL-DBA	DBU-DBA
1	65.7	68.9	70.8	76.9	76.9	11.2	3.2
2	66.5	69.8	71.9	77.6	78 • 9	11-1	3.3
3	67.5	70•6	72.7	78 • 1	80.0	10.6	3 • 1
4	69.1	71.4	73.5	79.0	81.0	9.9	2.3
5	69.6	71.7	74 • 1	79.4	81.0	9 - 8	2.1
6	69.2	71 - 7	74-5	79-2	80 • 5	10.0	2.5
7	67.9	71.5	74.8	79.2	80 • 3	11.3	3.7
8	66 • 4	71.2	74.8	78.9	78.9	12.5	4.8
9	65.7	71.3	75 • 1	78 • 6	79.7	12.9	5.6
10	65 • 4	71.4	75 • 6	78.5	80 - 1	13.1	6.0
11	65 • 1	71.5	76.0	78.5	79 - 9	13.4	6 • 4
12	65 • 1	71.6	76.3	78.6	78 • 6	13.5	6.5
13	67 • 7	72.6	76•9	79.5	79.5	11.8	4.9
14	69•7	73•9	77.6	80.5	80.5	10.8	4.2
15	71 • 0	74.6	78 • 1	81.2	81.2	10.2	3.6
16	72.2	75 • 4	78•5	82.2	82.2	10.0	3.8
17	72.8	75.9	78.9	82.8	82.8	10.0	3 • 1
18	72.8	76•2	79.4	83.1	83 • 1	10.3	3.4
19	72.5	76•4	79.8	83.3	53.3	10.8	3.9
80	73.2	77•4	80•5	84.1	84 • 1	10.9	4.2
21	73 • 9	78•3	81.0	85.2	55.2	11.3	4 • 4
22	74.6	79.0	81 • 3	86.3	87.8	11.7	4.4
23	74.7	79•3	81 • 4	86•7	88.5	12.0	4.6
24	75.0	79.5	81 • 7	86•9	86.9	11.9	4.5
25	75.7	80 • 1	82•1	87.0	88 • 4	11.3	4 • 4
26	76 • 1	80 • 6	82.6	86.9	86.9	10.8	4.5
27	76 • 6	81.0	83.0	87 • 5	87.5	10.9	4.4
28	76.6	81.3	83.4	88 • 1	88 • 1	11.5	4.7
29	77.3	81 • 6	83.5	88•6	88 • 6	11.3	4.3
30	77.6	82.0	84.2	89 • 1	89.1	11.5	4 • 4
OH → 31	78 • 1	82 • 5	84.8	89•8	89•8	11.7	4.4
32	75.5	82.8	85 • 4	90 • 3	90•3	11.8	4.3
33	78 • 3	82.5	85.0	90.2	8.06	11.9	4.2
34	77 • 4	81.6	83 • 8	89.0	89.0	11 - 6	4.2
35	75.8	80 - 1	82.0	87.6	87•6	11.8	4.3
36	74•0	78 • 1	79 • 7	85•6	85•6	11.6	4 • 1
37	72.0	76 - 1	77.7	84.0	84.0	12.0	4 • 1
38	69 • 6	74.2	75.5	82.0	82.0	12.4	4.6
<b>39</b>	68 • 4	73.0	74.5	80.6	80 • 6	12.2	4 • 6
40	67 • 4	72.2	73 • 6	79 • 4	79 • 4	12.0	4 - 8
41	66•0	71.0	72.8	78 • 4	79•7	12.4	5 • 0
42	65•0	70 • 2	72 • 1	77.6.	77•6	12+6	5•2

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TABLE 8-V

### NOISE LEVEL TIME RISTORY DATA

HUGHES 500 C

OCTOBER 28 1976

# EVENT 107. 144 MPH FLY BY. CENTERLINE MIC. ( SOFT SITE )

# 1/2 SECOND INTEGRATION VS NOISE INDEXES (DB RE 20 MICRO PA)

INT	DBA	DBD	OASPL	PNL	PNLT	PNL-DBA	DBD-DBA
1	54.3	63•2	63 • 1	•0	۰0	-54.2	8.9
3	54.6	63 • 6	63.8	•0	•0	-54.5	9.0
5	63.3	66.9	67.4	75 • 7	75•7	12.4	3 • 6
7	66.3	68.9	69.2	76.7	76.7	10.4	2 • 6
9	68.6	70.8	71.2	78.2	78•2	9•6	2.2
11	65.3	68.7	69.8	76.5	76.5	11.2	3 • 4
. 13	66.2	69.3	70.4	77 • 1	77.1	10.9	3 • 1
15	70.4	72.9	73 • 7	80.2	80.2	9•8	2.5
17	73 • 3	76.0	76 • 4	82.8	82.8	9•5	2.7
19	69.9	73.5	74.9	80 • 7	80.7	10.8	3.6
21	68.7	72.9	75.3	80.9	80.9	12.2	4.2
23	69.9	73.3	76.0	81 • 3	82.6	11-4	3 • 4
25	69.6	73.7	76.9	81.4	81.4	11.8	4 • 1
27	68.6	73.5	77.2	81 - 1	81 • 1	12.5	4.9
29	70.2	74.9	77.9	82.0	83.4	11.8	4.7
31	73.7	78 • 1	80 • 4	85.2	85.2	11.5	4 - 4
33	75.5	79.9	81.9	86.2	86.2	10.7	4 • 4
35	75.4	80.0	81.8	86.6	86.6	11.2	4.6
OH → 37	76.0	80 • 7	82.2	87.5	87.5	11.5	4.7
39	77.0	81.4	83 • 1	88.2	88.2	11.2	4 • 4
41	76 • 4	81 + 1	82.6	88.3	88.3	11.9	4.7
43	72.9	77.8	78.7	85.0	85.0	12.1	4.9
45	69.1	73.2	73.8	81.0	81.0	11.9	4 • 1
47	67+8	72.0	73.0	79.8	79.8	12.0	4 • 2
49	65 - 1	69.9	71.2	77.5	78 • 8	12.4	4.8
51	61.6	67.5	68 • 8	75•3	75•3	13.7	5.9
53	59.8	65.9	67 • 4	74.0	74.0	14.2	6 • 1
55	58.9	65.4	66.3	73.8	73 • B	14.9	6 • 5

### TABLE B-Y

### NOISE LEVEL TIME HISTORY DATA

### HUGHES 500 C

OCTOBER 28 1976

#### EVENT 106, 144 MPH FLY BY, CENTERLINE MIC. ( SOFT SITE )

# 1/2 SECOND INTEGRATION VS NOISE INDEXES (DB RE 20 MICRO PA)

INT	DBA	DBD	OASPL	PNL	PNLT	PNL-DBA	DBD-DBA
1	63 • 1	66•6	70.7	73 • 6	74.7	10.5	3•5
2	65•6	68 • 4	71.7	75.3	75.3	9.7	2.8
3	67 • 6	70 • 4	73.0	76.6	76•6	9.0	2.8
4	69.1	71 • 8	73.8	77.7	77.7	8 • 6	2.7
5	69.7	72•5	74.4	78.2	78.2	8 • 5	2.8
6	69.7	72.4	74.7	78 • 4	79.5	8 • 7	2.7
7	69.3	72.3	74.9	78.2	79.4	8.9	3.0
8	69•2	72.8	75•7	79.2	79.2	10.0	3+6
9	69•0	73 • 1	76.0	79.8	79.8	10.8	4 - 1
10	68 • 8	73 • 1	76.3	79.9	79.9	11-1	4.3
11	69.3	73.5	76.6	80 • 2	80.2	10.9	4.2
12	70 • 6	74.5	77.3	80.7	80.7	10 • 1	3.9
13	71.9	75.6	78.0	81.7	81.7	9.8	3 • 7
1.4	73.2	76 • 8	78•7	83.0	83.0	9 • 8	3 • 6
15	73.5	77.2	79.2	83∙5	83.5	10.0	3 • 7
16	73.3	77.0	79.3	83.5	83.5	10.2	3 • 7
17	71 - 7	75+8	<b>7</b> 8•8	82.5	82.5	10.8	4 • 1
18	70 • 7	75.0	78 • 6	81.7	81 - 7	11.0	4.3
19	70 • 5	75•3	79•2	81.9	33 • 1	11-4	4.8
50	71 • 4	76.3	80-1	82.8	82.8	11 • 4	4.9
21	72 • 8	<b>7</b> 7•5	81.2	84-1	84.1	11.3	4.7
22	74 • 1	78•9	82.3	85 • 1	86.4	11.0	4.8
23	75•5	79.9	83.0	86.3	86.3	10.8	4 • 4
24	76 • 1	80 • 4	83.2	87.1	87.1	11.0	4.3
25	77.2	81.2	83.6	88.2	88.2	11.0	4.0
oi. <del>&gt;</del> 26	78•0	82.2	84.0	89.5	89.5	11.5	4 + 2
27	78 • 8	83 • 2	84.4	90.6	90 • 6	11.8	4 • 4
28	78 • 6	83 • 2	84.3	90 • 1	90 • 1	11.5	4.6
29	77•9	82 • 4	83.5	89.7	89.7	11.8	4.5
30	76 • 7	80•9	82.2	88.5	88.5	11.8	4.2
31	74.8	78•9	79•9	86.4	86.4	11.6	4 - 1
32	73.0	77.0	77 • 7	84.2	84.2	11.2	4.0
33	70 • 6	74.5	75.0	81.9	81.9	11.3	3.9
34	69.3	73 • 3	74 • 1	80 • 4	80 • 4	11-1	4.0
35 26	67.0	71 • 6	73.0	78 • 1	78 • 1	11.1	4.6
36 27	65 • 6	70 • 4	72 • 4	77.2	78•3	11.6	4.8
37	64.3	68•9	71 • 3	76.2	76.2	11.9	4.6

### TABLE 8-VI

## NOISE LEVEL FREQUENCY SPECTRA TIME HISTORY HUGHES 500 C

OCTOBER 28 1976

EVENT 65. 6 DEGREE APPROACH. MIC. 150 METERS WEST

1/3 OCTAVE FREQUENCY BAND US TIME (SECONDS)
(DB RE 20 MICRO PA)

BAND	-19.5	-15-5	-11.5	-7.5	-3.5	O	• 5	4.5	8•5	11.0
17	57.9	57.6	60.8	59 • 4	55 • 4	58 • 4	58.8	57.8	56 • 5	54.9
18	61.7	61.9	57.6	60 • 7	61 • 9	66.9	68 • 0	65 • 7	63 • 1	62.6
19	55 • 7	55.2	54.7	56 • 6	55 • 4	56.2	56•4	57.0	55.9	55 • 4
20	57.7	59.6	60 • 3	59 • 1	59•3	57.9	58 • ສ	62 • 4	63.2	65 • 9
21	62.5	64.8	66 • 3	62 • 1	60 • 1	56 • 4	56.3	58.1	58 • 2	58 • 9
22	49.4	51.8	51 • 6	51.2	52.5	56.2	57-4	52 • 1	51 • 5	52 • 2
23	48.0	49.2	47.4	50.3	61.5	64.8	66•6	64+4	50 • 9	52.8
24	58.5	49 - 1	50 • 7	56.6	64.2	64 • 1	64.2	65•3	53 • 6	47.2
25	45.8	48.5	62.5	64.0	62 • 6	61.7	61.0	69•3	63 • 4	52 • 7
26	54.6	51.9	63 • 6	63 ∘ 8	61 • 1	67.0	67.5	65.2	66.3	57.5
27	58.3	57.3	67.0	60 ∙ 8	66.7	70.0	65 • B	71 - 3	63 • 5	59+2
28	59.0	57 • 3	59.3	65 • 5	69.0	68 • 1	68 • 1	69 • 7	58 • 8	57.2
29	53 • 8	49.7	58 • 2	66 • 4	69 • 2	65.2	65.6	66.2	62.5	52•9
30	52 • 8	50 • 2	55 • 3	58.2	60.7	63.2	64.5	62 • 4	57•5	50 • 8
31	50 • 6	47.0	52.9	54.4	56.9	60.9	61.9	59•7	53 • 6	48 • 1
32	45.2	45.2		51 - 1	54.4	56.9	58.7	57.1	53 • 3	45 • 5
33	45.0	_		48.2	51.3	54.8	55.9	52•3	48 • 1	45.0
34	45 • 0			45.0	47.7	50 • 5	51.4	48 • 4	45 • 0	45 <b>-</b> 0
35	45 • 0			45.0	45.0	46.2	46.4	45-1	45.0	45.0
36	45.0			45.0	45.0	45.0	45.0	45.0	45.0	45.0
37	45 • 0			45.0	45.0	45 + 0	45.0	45.0	45•0	45.0
38	45.0	_		45.0	45.0	45.0	45.0	45.0	45.0	45.0
39	45.0			45.0	45.0	45.0	45.0	45.0	45.0	45.0
40	45 • 0		_	45.0	45.0	45.0	45.0	45.0	45•0	45.0
A	62.0			69.8	72.2	73.0	72.9	73.5	67•9	61 • 4
D	67.0			72.5	75 • 1	76.2	76.5	77.0	71 • 6	67 • 3
OASPL				73.8	76.5	79.0	79.2	77.8	73.3	70 • 7
	, 70•8 74•8	_		79.8	82.2	83.3	83.2	84.0	79 • 5	75 • 1
PNL	74.8	_		81.6	83.7	83.3	83.2	84.0	81.0	75 • 1
PNLT	14.0	, ,,,,,		02-0						

### NOISE LEVEL FREQUENCY SPECTRA TIME HISTORY

HUGHES 500 C

OCTOBER 28 1976

EVENT 104, 130 MPH FLY BY, MIC . 150 METERS WEST

1/3 OCTAVE FREQUENCY BAND VS TIME (SECONDS)
(DB RE 20 MICRO PA)

BAND	-10.5	-8.5	-7.0	-6∙5	<b>-4</b> ∘5	-2.5	<b></b> 5	0	1 - 5	3.5	5•5
17	53 • 8	53 • 8	54 • 5	53•9	55•8	55•0	53.7	52.9	55•0	57.0	54.5
18	55∙€	55.6	57 • 3	56.5	57.2	55.8	56.8	55.2	58 • 1	59.2	59.6
19	63 • 4	65.7	66.3	66 • 4	63.9	59.7	54.3	53 • 8	54.3	54.7	56 • 7
20	55•7	56 • 6	56 • 1	56 • 4	55.0	53.6	64-1	65.5	61.3	61.3	57 • 3
21	65 • 7	67.7	66.9	66 • 1	62 • 4	58 • 4	64.9	64.6	63.9	56 • 1	53 • 5
22	55 • 4	56 • 8	53 - 6	52.6	49.3	59.7	64.4	64.0	63.8	59.0	53 • 5
23	49.9	48.0	47.5	47.8	58 • 5	63.9	63.8	63.9	66.2	68.2	60 • 3
24	54 • 1	50 • 7	60.5	61.3	72.5	72.9	61.6	59 • 4	58 • 6	59.6	58 • 4
25	49 • 2	55.7	61.7	62 • 1	64.3	60.0	66.0	67.8	68•6	58.9	60 • 6
20	60 • 0	66 •8	72.8	72.4	71.8	66 • 4	67.9	66.8	69.0	66.8	54 • 9
27	55 • 9	70.2	73.6	70.4	65.2	69 • 1	64.1	65.1	66 • 1	63.0	63 • 5
28	52.2	63.0	62.4	63 • 1	69.4	65.0	64.5	64.1	64.0	62.9	58.5
29	49.7	61.5	71.0	69 • 4	63•6	63.9	65 • 4	65 • 1	62.2	59.4	56 • 4
30	46 • 6	59.6	62 • 3	60.7	61.9	62.6	63.6	63 • 1	<b>59•7</b>	56.9	53 • 1
31	45.2	5 <b>2 •</b> 2	60.3	59.3	58 <b>•5</b>	61.3	63.2	62.5	57.3	55•8	50 • 6
32	45.0	48.9	54•8	54 • 6	55.7	59 • 1	59•6	59.0	55.3	52 • 8	47.8
33	45.0	45.6	49.4	49 • 8	49•7	52 • 6	54 • 4	54.1	51.5	48 • 4	45.2
34	45.0	45.0	45.0	45.0	45 • 1	48.3	50•6	50.1	47.6	45.3	45.0
35	45.0	45.0	45.0	45.0	45.0	45.0	46.3	46.2	45•O	45.0	45.0
36	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45•0	45.0
37	45.0	45.0	45.0	45•0	45.0	45.0	45.0	45.0	45.0	45.0	45.0
38	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0
39	45 • 0	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0
40	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45•0	45.0
Α	59 • 4	70 • 4	75.0	73.8	73.5	72 • 5	72 • 1	71.8	71.0	68•2	65.0
D	67 • 2	73.7	77•7	76.7	76.6	75 • 7	75•6	75•7	<b>7</b> 5•3	72.9	69 • 5
OASPL		75.8	79.0	78 • 1	78 • 4	77 • 6	78•2	78•7	78 • 4	75.0	70 • 1
PNL	75•0	81 • 4	84•6	83.8	€3•8	83.5	85.8	88•4	82.4	80 • 1	77 • 3
PNLT	75.0	81.4	87•5	86.2	85•5	83•5	88.88	88•4	82.4	80 • 1	77 • 3

### NOISE LEVEL FREQUENCY SPECTRA TIME HISTORY

HUGHES 500 C

OCTOBER 28 1976

EVENT 105. 130 MPH FLY BY. MIC. 150 METERS WEST

1/3 OCTAVE FREQUENCY BAND VS TIME (SECONDS)
(DB RE 20 MICRO PA)

BAND	-11.5	-8.5	-5.5	-2.5	0	•5	3 • 5	6.5	9•5	10.0
17	57.2	57.2	58•6	59.9	60•5	60.0	58 • 0	60.0	60 • 1	59•5
18	65.6	64.7	63.0	62.0	61.2	61 • 1	60.9	58 • 8	57.6	57.7
19	59.3	61.0	62 • 8	57.8	54.9	55.2	61.2	58.9	60.9	62.6
20	53.9	55.0	55.2	55 • 6	66.4	65.9	58 • 4	61.0	60.6	60.9
21	63.3	64.7	61.4	60.6	65.1	65.8	59.6	59.0	62.6	62.6
22	52.4	51.0	47.7	60 - 1	65.0	65.2	60.4	51.4	49.4	49 • 1
23	48 • 1	47.7	57.3	63.3	64 • 1	63 • 1	68 • 1	56.2	48.0	48.9
24	52 • 3	56 • 8	70 • 4	71.0	58.9	58.0	59.6	59.4	52.0	51.5
25	50 • 4	59.8	67.2	58•6	68.9	69∙6	60.2	62.6	58 • 6	56.9
26	57.5	65.5	72.1	66.0	67.9	67.5	68.6	55.4	58.9	58•5
27	60 • 8	64.8	62 - 1	65.7	65 • 7	66.1	64.2	59 . 6	56.7	57.0
28	57 <b>-7</b>	58•3	70.3	64.1	64.2	63.9	64.9	61 • 1	49.8	48.7
29	50 • 4	63 • 8	63.0	62.4	64.5	64.3	60•9	54.5	53.0	51.6
30	50.8	56 • 1	61.3	60•4	63.3	65.9	58 • 6	52 • 4	50•6	50 • 1
31	46.2	52•9	55.4	58•5	62.5	62•3	55 • 7	50•6	52 • 1	52•2
32	45 • 0	47.2	54.6	58•0	58 • 5	58•3	53 • 1	47.7	46.3	46.5
33	45 • 0	45 • 1	46.4	52•3	53.7	52.8	49.0	45.1	45.0	45.0
34	45 • 0	45.0	45.0	48•3	50.2	49 • 8	45.3	45.0	45.0	45.0
35	45.0	45.0	45.0	45.0	46.2	45.7	45.0	45.0	45.0	45.0
36	45 ∙ 0	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0
37	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0
38	45 • 0	45.0	45•Ú	45.0	45.0	45.0	45.0	45.0	45.0	45.0
39	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0
40	45 • 0	45.0	45.0	45•0	45.0	45 • 0	45.0	45.0	45.0	45.0
Α	61 • 4	68•7	73.4	70.7	71.9	71 • 9	69•4	64.3	61.2	60.9
D	67 • 4	71.4	76.3	74.6	76 • 1	76 • 2	74.0	69•0	67.5	67.5
OPSPL	70.9	73.5	78.0	76.8	78.7	78 • 9	76.0	70.6	69 • 6	69.7
PNL	75 • 5	79.0	83.6	88.8	88.9	82 • 8	81.5	76 • 6	75.0	74.8
PNLT	75•5	81.2	86.2	82.2	82.9	82.8	81.5	78 - 1	76.2	76 - 1

## TABLE 8-TI

### NOISE LEVEL FREQUENCY SPECTRA TIME HISTORY

HUGHES 500 C

OCTOBER 28 1976

EVENT 106, 144 MPH FLY BY, MIC. 150 METERS WEST

1/3 OCTAVE FREQUENCY BAND VS TIME (SECONDS)
(DB RE 20 MICRO PA)

BAND	-7.0	-5•5	-4•0	-2.5	-2.0	-1 -0	0	•5	2.0	3•5	4.0
17	54.3	56 • 1	56.0	58 • 4	60 • 4	60.3	58 • 7	58 • 2	60.3	58 • 3	57.8
18	56 • 9	57.9	59.0	61.7	63 • 1	64.3	65.2	66 • 1	69.4	67.7	66.3
19	67.8	70.7	72.5	73.5	73 • 8	71 • 1	66.6	64.3	65.6	65.8	65.3
20	54.6	58 • 1	60.0	62.2	62 • 1	62 - 1	62.7	64.3	64.7	63.6	63.1
21	67.2	71.8	71.4	71.7	70.8	68 • 0	63.8	61.0	56.8	59.5	59 - 1
58	59.2	63.7	63.9	60.5	58 • 4	55.2	59.6	60 • 8	58.9	52 • 1	52 • 1
23	54.9	58.7	55.3	54.5	56.8	63 • 4	69.8	70 • 7	66.5	58 • 4	55 • 4
24	66.3	68.3	63 • 1	69.9	72.4	73.9	73.9	73 - 4	69.7	64.5	62+2
25	50.9	52.5	61.5	67.5	69.3	72 - 1	73.0	72 • 5	70.0	68.8	66.6
56	55 • 3	60.9	75.0	78.2	78.5	74.6	68.7	67.6	65.5	65.7	64.7
27	56.0	70 • 4	77.7	76 • 3	74.9	67.2	7^ }	73 • 4	71.5	62.6	61.8
28	63 • 5	71.9	74.4	68.2	67.6	70.2	70.8	70 • 1	68.9	66.3	63.4
29	62.1	66.7	68.0	70 • 8	71.1	69.0	70 • 4	70 • 1	68.5	63.1	62.6
30	54 • U	55.8	69 • 1	67.7	66.9	67.2	68.4	69 • 0	65.4	62.0	59.5
31	45.5	57.0	66.3	66.5	67.1	66 • 1	67.0	66.6	63.9	59.8	58 • 3
32	41.9	51.4	62.5	65.0	65 • 6	65 • 1	66.0	65.5	64-1	57.0	55.0
33	35.8	48•7	55•8	63 • 4	64.0	61.5	61.0	60 • 7	56.6	51.9	50 • 4
34	35.0	36 • <b>7</b>	48.9	54.6	55•4	55.6	57.1	57.0	53.3	47.9	45.4
35	35.0	35.0	41.8	47.6	49.0	51 • 1	53.3	53.0	48.7	42.6	40 • 3
36	35.0	35.0	35.9	40 • 6	42.0	44.2	46.9	47.0	42.7	37.3	35 • 6
37	35.0	35.0	35.0	35.0	35.2	37.5	40.6	41.3	39.2	35.0	35.0
38	35.0	35.0	35.0	35.0	35.0	35.0	35.5	35 • 8	35.0	35+0	35.0
39	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35+0	35.0	35.0
40	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35+0	35.0
А	66 • 1	73.7	79.0	78.5	78 • 4	76.7	77.3	77 - 1	75.0	70.7	69.0
Ð	70.1	76.6	81.7	82.4	82.4	80.7	81.1	81.0	78.7	74.4	72.9
OASPL	74.6	79.2	88.6	83.5	8 • 8	82.4	83.4	83.9	81.6	76.8	75 - 1
PNL	76.4	32 • <b>8</b>	88 • 1	39.2	89.6	87.6	87.2	87.5	85.3	81.2	79.4
PNLT	77.9	84.0	88•1	89.2	90•9	87 • 6	87.2	87.5	86.5	82.3	79.4

### NOISE LEVEL FREQUENCY SPECTRA TIME HISTORY

HUGHES 500 C

OCTOBER 28 1976

EVENT 107. 144 MPH FLY BY, MIC. 150 METERS WEST

1/3 OCTAVE FREQUENCY BAND VS TIME (SECONDS)
(DB RE 20 MICRO PA)

BAND	-8.5	-6•5	-4.5	-2.5	<b></b> 5	0	1.5	3•5	5•5
17	52 • 4	53 • 7	55•3	57 • 3	56.8	56+1	56 • 1	57.9	57.0
18	54.6	55 • 1	57 • 3	60 • 5	61.5	62 • 4	66.3	66.1	58.0
19	65.2	66.7	70 • 0	71.6	66.8	63.9	60.0	58 • 2	58 • 7
20	53 • 4	56 - 4	59.5	60.7	60 • 6	60.5	62.5	61.4	61.3
21	64.9	67.9	71 • 0	70•5	65.7	64.2	58.4	55.9	58.5
22	55.5	59.2	61.8	58.4	56 • 4	60.3	63 • 4	56.1	50.2
23	52.7	56.7	55.9	55.6	64 • 1	65.2	66 • 8	66.0	52.5
24	64 - 9	66 • 7	62.2	71.1	74.0	72.3	69.6	65.3	59.2
25	50.2	50.3	61.8	68 + 5	70 • 0	69 • 0	66.8	68 - 1	64-1
26	57.5	56 • 1	73.8	77.8	70.7	67 - 4	69 • 8	63.0	62.5
27	58 • 1	65.5	77.3	74.6	69 • 1	70.3	71.3	69•6	58 • 7
28	61.5	67.2	73 • 4	66.7	69.6	68 • 5	68 • 3	66.0	60 • 8
29	61.0	64 • 1	67.2	70.2	68 • 5	69.2	67.4	64.6	58•6
30	52 • 3	53 • 1	66 • 7	64.3	66 • 4	66.4	67.0	62.0	56.7
31	45.0	52.6	63 • 3	62.3	65.6	64.8	65.2	59 • 8	54.6
32	45.0	48.0	57 • 7	60 • 4	64.2	64.2	63 - 1	57.4	51 • 4
33	45.0	45.0	51.0	56.1	58.3	57.4	58 • 1	52.7	47.1
34	45.0	45.0	45.0	50 + 3	54.1	53.5	54.6	48.7	45.2
35	45.0	45.0	45.0	45 • 4	49.4	49.4	50 • 2	45 • 6	45•0
36	45.0	45.0	45.0	45.0	45.0	45.0	46.0	45.0	45.0
37	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0
38	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0
39	45.0	45.0	45.0	45.0	45 • 0	45.0	45.0	45.0	45.0
40	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0
A	65.0	69.9	77.5	77-0	75.9	75 • 4	75 • 1	72.0	66•3
D	69.7	73.2	80.3	80.9	79•5	78 • 8	79.0	75•7	70.6
OASPL	73.3	76.0	81.4	82 • 4	81.6	81 • 4	82.3	<b>78 •</b> 5	71.9
PNL	77-1	80 • 3	87.6	88 • 4	86.3	85•4	85 • 7	83•0	77.9
PNLT	77 - 1	80 • 3	87 • 6	90•0	86•3	85•4	85.7	83•0	77.9

#### NOISE LEVEL FREQUENCY SPECTRA TIME HISTORY

HUGHES 500 C

OCTOBER 28 1976

EVENT 108, 150 MPH FLY BY, MIC. 150 METERS WEST

1/3 OCTAVE FREQUENCY BAND VS TIME (SECONDS)
(DB RE 20 MICRO PA)

•											
BAND	-14+5	-12-0	-9•5	-7.0	-4.5	-2.0	<b></b> 5	0	• 5	3.0	4.0
17	56.4	58 • 4	57.3	58•0	59 • 1	59.2	61.7	62 • 1	61.5	60•9	59•0
18	57.8	59 • 2	60.5	65.0	61.8	63.9	65.9	67.5	69 • 4	67.1	63 • 7
19	65.0	65.0	66 • 4	69.2	77.5	76 - 1	74.6	74.5	74.6	72.2	70 - 7
20	59•5	58 •8	56.8	58•7	62 • 1	64.3	69.3	71.0	71.8	. 64 • 8	63.4
21	64•7	65•8	65•9	69.3	72.9	72.9	72.5	70 • 7	67-1	61.6	61.0
22	55.9	56 • 6	56 • 4	62.4	65.6	61 • 8	58.9	57.5	<b>57•</b> 3	55•3	55.9
23	55•2	53 • 8	54.0	58.8	61.0	56 • 8	64.1	65.8	66 • 4	54.8	53.3
24	64.5	62•6	64.2	70.0	67.7	69 • 0	71 - 9	70 = 7	70 <b>-</b> 8	61.9	56.7
25	54.4	51.0	52 • 1	56 • 1	55.9	69 • 6	75.9	76 • 3	75.9	68 • 5	62.8
26	67.2	61 • 5	62.2	62 • 4	68.7	77 • 4	75 • 6	73.9	71.9	68.3	64 • 1
27	64.7	53•7	54.9	59.3	75.3	74.5	68 -8	69.5	70 • 3	67.5	66.0
88	58•9	53.2	51.9	66 • 5	74.4	66.9	74.3	74.6	73.6	65.3	58 • 4
29	54.5	54.3	56 • 8	68 • 1	71.8	58 • 4	68.7	68 • 4	68.2	65.3	61.6
30	57.9	54.5	57.2	68.89	64.0	67.2	69.9	69.2	68.2	61.2	56.7
31	55.7	49.8	51.0	51 • 7	65.9	66.3	68.0	67·8	67-1	59.3	55+5
32	48 • 8	45.0	45 • 0	47.8	58•9	65.0	66.3	66.2	66•0	56.8	52.0
33	45.0	45.0	45.0	45.0	53.9	62•6	62.0	61.6	60.5	52.6	48.4
34	45.0	45.0	45 • O	45.0	46.6	54.9	57.3	57.0	56.3	48 • 4	45.5
35	45.0	45.0	45.0	45.0	45.0	49.6	53.3	52.7	51-6	45.3	45.0
36	45.0	45.0	45.0	45.0	45.0	45.5	47.9	47.7	47.4	45.0	45.0
37	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0
38	45.0	45.0	45 • 0	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0
39	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45-0	45.0	45.0
40	45.0	45•0	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0
Α	67.7	62.3	63.4	71.9	77.6	77•5	78.5	78 • 4	77.9	71.5	67.2
D	71.4	68•9	69.5	74•9	80.5	81 • 6	82.5	82.3	81.6	75-4	72.0
OASPL	73•6	72.1	73.3	77•6	82.9	83.3	84.8	85.0	84.8	78 • 4	<b>7</b> 5•3
PNL	80.0	76.6	$77 \cdot 1$	81.7	87.4	89.2	89.5	89.2	88 • <b>7</b>	82•7	80.0
PNLT	80.0	76 • 6	78.5	83 • 1	88•9	89•2	91•4	91.0	90 • 1	82•7	81.3

#### NOISE LEVEL FREQUENCY SPECTRA TIME HISTORY

HUGHES 500 C

OCTOBER 28 1976

EVENT 109, 150 MPH FLY BY, MIC. 150 METERS WEST

1/3 OCTAVE FREQUENCY BAND VS TIME (SECONDS)
(DB RE 20 MICRO PA)

BAND	-11.5	-9•5	<b>-7.</b> 5	-5.5	-3.5	-1.5	0	•5	2•5	4.5
17	54.7	53 • 6	55•6	56.5	58 • 1	59 • 4	59•4	59.0	60 • 5	59 • 4
18	56.7	58∙5	57.6	57.4	61.2	64.2	63.2	65.0	68 • 8	61.5
19	60 • 2	63.5	67.0	69.3	73 - 1	71 • 7	63 • 1	60.6	59 • 4	59.3
20	54.2	54.0	56 • 1	58.0	61.2	62.9	66.7	67.6	65.2	61.9
21	62.8	64.8	68 • 4	71.3	72.5	71.0	65.5	62.7	58 • 2	58.5
22	52.0	58 • 1	61.4	62.7	62.9	57.2	59 • 6	60 8	55.6	51.7
23	52.7	55.2	57.6	57.8	55 - 1	59 • 8	67.2	67.4	63-1	53.9
24	67.8	70.0	69.0	65.2	61.8	72.5	71 - 1	70 · B	67.5	59.6
25	56 • 8	56.4	53 • 7	54.3	63.2	70 • 3	73.8	74.1	69.4	66.5
26	65 • 8	66 - 4	62.2	67.5	76.0	75.5	68.3	66 • 8	64.9	65.1
27	56 • 4	59.6	60 • 6	73.7	78.0	67.0	71.4	72.7	70.0	61.9
28	56.0	63.2	67.7	72.6	75.0	67.9	71.6	71.0	68 • 3	61.4
29	60.3	68.3	68.3	69.7	69.2	65.6	69.9	70 • 1	66.7	61.3
30	57.4	65 • 4	61.9	62.9	71.0	64.9	66•6	67.0	62 • 4	53.2
31	51.5	57.9	51.9	64.4	64.7	64 • 1	66.0	65.6	61.0	56.4
32	45.2	48.2	48.7	55.1	60.3	62.7	64.6	64.6	60.2	53.9
33	45.0	45.0	46.0	51.2	55.1	59.7	59.3	58 • 9	54.8	49.2
34	45.0	45.0	45.0	43.3	47.4	53.0	55.5	55.5	50 • 6	46.5
35	45.0	45.0	45.0	45.0	45.0	47.7	50.9	50.9	46.6	45.0
36	45.0	45.0	45.0	45.0	45.0	45.0	46.0	46.4	45.0	45.0
37	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0
38	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0
39	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0
40	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0
Α	66.2	71.9	71.8	75.9	79.0	75 • 4	76.8	76.8	73.4	68.7
D	71.2	75.1	74.4	79.1	82.3	79.3	80.6	80.6	77.2	72.4
OASPL	72.6	75.9	76.8	80 • 0	83 • 6	81.8	83.2	83•6	80.0	74.2
PNL	78.8	81 • 4	81.5	85.5	88•9	87.5	87.0	87-1	84.0	79.6
PNLT	79•9	82.7	83 • 0	87.2	30.5	87.5	87.0	87-1	84.0	79.6

LOWER LIMIT OF ANALYSIS SYSTEM= 45.0

#### NOISE LEVEL FREQUENCY SPECTRA TIME HISTORY

#### HUGHES 500 C

OCTOBER 28 1976

EVENT 110, 130 MPH FLY BY, MIC. 150 METERS WEST

1/3 OCTAVE FREQUENCY BAND VS TIME (SECONDS)
(DB RE 20 MICRO PA)

BAND	-15.0	-12-0	-9-0	<del>-</del> 6÷0	<b>≈</b> 5÷5	-3+0	0	3-0	6.0
17	57 • 4	55•7	54•5	55•1	55.9	57.0	59•2	59 • 1	56•6
18	55 • 8	56 • 7	56.7	59.6	59.7	60 • 8	65+0	65.1	57.3
19	58•7	64.5	66 • 1	69.4	70 • 0	70 • 1	63.0	60.7	58.8
20	55.0	55 • 1	55+3	58 • 7	59.4	61.8	64.7	62.6	59.5
21	59.0	63.5	65.3	69.7	69 • 7	68.5	61.6	59.4	57.8
22	49.7	55.2	56+3	61.9	62 - 3	59 • 3	57.7	54.4	53.8
23	49.1	52 • 6	53.2	56+6	56 • 6	54.3	70.3	63.2	53.2
24	62.6	66.6	65.7	65.9	65 • 1	65 • 5	72.9	64.3	53 • 1
25	52.1	54.2	49.8	53.3	57 • 1	66.5	71.9	68 • 8	61 • 3
26	61 • 7	65 • 1	54.0	64-3	68 • 6	74.8	67.0	64.8	61.2
27	55.0	5ۥ2	54 - 1	73.6	75.5	73 • 1	70.6	64.4	61.1
28	51.7	60 • 4	60.0	72.5	74.0	64.8	70 • 4	67 • 1	54.0
29	56.4	65.3	59.7	70.5	71.0	66.0	69.3	61.8	56.5
30	53.0	61.7	52.8	61.2	64.5	61.5	66.0	61.3	53 • 7
31	47 • 7	54.9	46 • 1	64.6	66.0	61 • 6	64.9	60 • 1	51.2
32	45 • 0	46 • 1	45.3	57.5	58.7	62.8	63.3	57.5	49.0
33	45.0	45.0	45.0	50 • 1	52.0	54.7	58 • 3	53.0	46.0
34	45.0	45.0	45.0	45.0	45 • 6	50.2	55 • 1	49 • 1	45.0
35	45 • 0	45 • 0	45.0	45.0	45.0	46.0	50.9	46.0	45.0
36	45.0	45.0	45.0	45.0	45.0	45.0	46.1	45.0	45.0
37	45.0	45.0	45.0	45.0	45 • 0	45.0	45.0	45.0	45.0
38	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0
39	45.0	45.0	45.0	45.0	45.0	45 • Ü	45.0	45.0	45.0
40	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0
A	61.9	69.8	63.7	75.4	76 • 7	74.9	75.9	71 • 1	63.9
D	68.0	72.1	69.8	77.9	79 • 4	78 • 8	79.9	75.2	68 • 8
OASPL	69.3	73.7	73.2	79.4	80 • 7	80.5	82.3	77.3	69.7
PNL.	75.9	79•3	77.2	85.2	86 • 7	86.3	86.1	82.0	76.5
PNLT	77•3	80 • 6	78.3	87.0	88.2	87.8	86.1	83.3	76 • 5
								_	

### NOISE LEVEL FREQUENCY SPECTRA TIME HISTORY

HUGHES 500 C

OCTOBER 28 1976

EVENT 65. 6 DEGREE APPROACH. MIC. 150 METERS EAST

1/3 OCTAVE FREQUENCY BAND VS TIME (SECONDS)
(DB RE 20 MICRO PA)

BAND	-34.5	-28-0	-21.5	-15.0	<b>~8.5</b>	<del>-</del> 5∘0	-2.0	0	4.5	11.0	13.0
17	56 • 8	63.0	58.9	61.2	57.2	56.0	57.1	58.2	59.5	56.2	57.9
18	62.3	61.3	61 - 1	63.7	63.6	64.6	67.0	64.1	63.7	61.4	60.7
19	57 • 4	57.4	56.7	50.4	64.0	64.4	59 • 1	54.1	57.1	55.8	56.6
20	60 • 6	57.4	58 • 1	61.6	59.1	62 - 1	57.2	55.0	63.9	65.2	63.4
<i>i</i> \$	57.3	58 • 8	63.2	66.0	64.4	61.1	55-1	56.9	58 • 4	59.8	58.9
22	49.5	50.6	51.0	50.6	50.5	49.9	54.2	57.9	53 • 3	54.0	53.0
23	47.8	49.6	48-1	49.7	50 • 7	62.8	62.0	68.4	63.4	68.8	60.5
24	49.3	49.7	49.5	52.0	56.7	70.5	64.1	63.8	63.1	52.5	54.3
25	46.0	46 . 8	51.8	54.2	64.6	66.7	59.4	58.8	67.5	55 • 1	58 • 5
26	47.1	48.0	52.6	54.6	63 • 1	63 • 1	63.9	68.8	63 • 4	53•8	56 • 1
27	52 • 2	<b>51 • 5</b>	54 - 6	57.9	62.0	61.7	67.4	66.8	65.6	57.0	50.2
28	52 • 1	51.8	52.7	54.6	58.5	66.1	61.3	65.6	66.3	57.6	48.2
29	45 • 6	45 • 1	45 • 5	50.0	61.5	59.8	62.6	62.7	61.9	57 • 4	52 • 1
30	45.0	45.0	45.8	52.5	54.9	56.7	61.1	61.5	60-1	52.8	51 - 1
31	45.0	45.0	45 • 0	46.6	55.2	55.9	58 • 4	60.7	57 • 1	52.8	47.3
38	45.0	45.0	45.0	45 • 1	50 • 1	53.8	55.9	57.2	55 • 4	50 • 0	47.7
33	45.0	45.0	45.0	45.0	45.3	49.9	51.8	54.0	52 • 4	47.7	45 • 6
34	45.0	45.0	45.0	45.0	45.0	46 • 1	49.0	50 • 2	48.7	45.0	45.0
35	45.0	45.0	45.0	45+0	45.0	45.0	45.7	46.8	45 • 1	45.0	45.0
36	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0
37	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45 • 0
38	45.0	45 • G	45•0	45.0	45.0	45.0	45.0	45.0	45.0	45 • 0	45 - 0
39	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0
40	45.0	45•0	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0
Α	55•0	54•3	56 • 7	60.3	66•8	70 • 1	69.9	71 • 5	70.3	63 • 3	60.0
D	64 • 3	64 • 4	65 • 0	67.0	70.9	74.0	73.7	75.5	74.3	68.3	67.1
OASPL	71.7	75 • 6	72.5	76.8	75 • 1	77 • <b>7</b>	75.4	76.9	77 • 1	72.2	73.7
PNL	72.3	<b>7</b> 2 • <b>3</b>	<b>7</b> 3 •0	74.7	78 • 3	81 • 6	<b>ខ1•1</b>	82.5	81.2	75 • 7	74.3
PNLT	72.3	73.5	73∙೧	76.0	79.9	83.4	81.1	82.5	81.2	75 • 7	74.3

#### NOISE LEVEL FREQUENCY SPECTRA TIME HISTORY

HUGHES 500 C

OCTOBER 28 1976

EVENT 104. 130 MPH FLY BY. MIC. 150 METERS EAST

1/3 OCTAVE FREQUENCY BAND VS TIME (SECONDS)
(DB RE 20 MICRO PA)

BAND	-10.0	-10 0		4. 0		_			
BAND	-13+0	-10.0	-7.0	-4.0	-1 +0	0	2.0	5•0	8.0
17	52.8	51.7	52+9	54 • 1	52 • 4	53.3	52.9	54.6	52.4
18	55 ∙ 6	56.3	57 • 7	5949	62 • 6	63.1	56.9	57.9	55.3
19	63 • 4	65.5	69.5	69.2	61.3	36.8	52.2	53 - 1	58.3
20	53 • 8	57.5	56 • 6	56.5	54.9	59.6	59.3	56 • 5	58.0
21	64.3	68.7	65.6	51.4	60∙6	64.0	64.2	51.2	53 ⋅ 6
22	56.5	56•9	57 • 1	49.6	62 • 1	64.0	62.2	54.1	46.2
23	50.2	49.2	47.9	58.0	63 • 2	62.7	69.5	59 • 1	47.6
24	54.9	49.6	61 • 4	72.3	70 • 1	59.9	56.7	57.9	55.3
25	46-1	51 • 8	57.0	62 • £	58.2	64.3	65.7	59.0	59 • 4
26	54.9	62.9	68 • 1	71.3	66 -2	67.3	67.5	59 • 7	54 - 1
27	55•6	62 - 4	66•6	68 - 4	68 - 3	64-3	66.0	63+3	52.8
28	57 • 9	60 • 9	57 • <b>7</b>	69.7	63 • 8	64.5	65 • 1	58 • 9	56.0
29	55•7	55.0	67.0	63+5	63 • 6	<b>54.2</b>	65.0	58.2	48 • 5
30	43 - 1	56 • 1	58 • 5	60.9	63.0	64.3	62.9	56.2	48 • 2
31	46 • 4	47 - 1	54•5	58 • 1	61.3	61 + 6	59.6	54.2	47-1
32	45.0	45.5	47 - 7	54.3	58 • 5	59.5	5♂•5	51.3	45.7
33	45.0	45.0	45.0	48.2	53 ₁ 6	55 1	53.5	47.6	45.0
34	45.0	45 0	45.0	45.0	50 - 6	51.9	50.2	45.2	45.0
35	45.0	45.0	45.0	45.0	46 • 1	46.6	45.7	45.0	45.0
36	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0
3 <b>7</b>	45 • 0	45.0	45.0	45.0	45.0	45 • C	45.0	45.0	45.0
38	45•0	45.0	45.0	<b>45</b> 0	45.0	45 · O	45.0	45.0	45.0
39	45.0	45 • 0	45.0	45.0	45 • C	45 • U	45.0	45.0	45.0
40	45 • 0	45.0	45 • 0	45.0	45.0	45.0	45.0	45.0	45.0
A	60 • 7	65.0	70.3	73-2	71.0	71 - 5	72 - 1	65.7	59.7
D	66 • 8	69 • 9	73 • 6	77 - 3	74.7	75 • 1	75.8	69.5	65.9
OASPL	70 • 7	73 • 8	76.0	78.0	76.0	76.5	76.3	71.4	67.3
PNL.	74.5	77 • 4	80 • 8	83.7	82.2	82.4	82.4	77.8	73.9
PNLT	74.5	79 - 1	83.8	84.9	82.2	82 • 4	82 • 4	77.3	75 • 6

### NOISE LEVEL FREQUENCY SPECTRA TIME HISTORY

HUGHES 500 C

OCTOBER 28 1976

EVENT 105, 130 MPH FLY BY, MIC. 150 METERS EAST

1/3 OCTAVE FREQUENCY BAND VS TIME (SECONDS)
(DB RE 20 MICRO PA)

BAND	-12-5	-10.0	-7.5	-5.0	-2.5	0	2.5	5.0	5.5
17	59•0	55 • 6	63.0	63 • 1	61.2	59.8	61.8	50.7	59.2
18	63.9	62 • 8	64.8	65.4	63 - 1	62.9	60.8	59.3	58.7
19	64.6	66.5	67.8	67.0	63 • 3	56.7	56.9	59.2	59.5
20	59 • 1	60.8	59.3	57.3	53.8	62.8	57.1	59 - 1	60.0
21	67.6	68.7	64.8	61.9	60.3	65 - 1	62.9	53 • 5	52.9
22	58.0	55.5	52.0	50.3	61.7	64.9	62.0	52.0	49.0
23	51.2	50 • 9	50.0	58.5	64.7	66.9	69.6	56.4	53.0
24	58 • 6	53 • 2	61.9	70 • 5	73 • 6	59.0	57.0	58.6	57.2
25	52.0	50 • 1	62.7	65-4	58 • 1	68.9	64.3	59.3	59.2
26	58.9	67.2	68.3	70.4	66 • 1	67.2	67.6	56 • 1	53.8
27	60 • 4	66 • 7	66.7	70.7	69.0	65.5	€3 • 8	64.0	63.0
88	59•4	63 • 6	64.7	73.8	64 <b>- 6</b>	64-4	65:0	56 = 0	55 • 7
29	53 • 5	60 • 4	66.7	66.8	63.7	64.6	64.6	55•7	54.0
30	53 • 7	59 - 1	58 • 5	63.7	61 • 5	63 • 4	61.7	53.8	50.8
31	50 - 9	49-2	53 • 6	60 - 1	59•4	61 - 1	59.5	51.6	49.9
32	45•5	45.0	50 • 9	55•6	57 • 4	57.6	56•6	48 • 8	47.0
<b>3</b> 3	45 • 0	45.0	45.7	48.9	51 • 1	53.8	52.5	45.9	45.2
34	45 - 0	45 • 0	45.0	45.0	47.8	50.8	48.9	45.0	45.0
35	45.0	45.0	45.0	45.0	45.2	46 • 4	45.2	45•0	45.0
36	45 • 0	45 • 0	45.0	45.0	45.0	45.0	45 . 0	45.0	45.0
37	45.0	45.0	45.0	45•0	45.0	45.0	45.0	45.0	45.0
38	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0
39	45.0	45.0	45.0	45.0	45 • Q	45.0	45.0	45.0	45.0
40	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0
A	63 • 5	69.2	71.5	75.6	72.6	71.9	70 • 9	64 • 1	62.9
D	69.1	72•7	74.0	78.2	76.0	75.8	74-6	68 • 8	67.8
OASPL,	73.2	75 - 3	76.2	79.2	77 - 1	77.6	76.4	71.2	70.3
PNL	76.6	80 • 2	81.4	85•4	83.7	82.7	88 *0	77.4	76.5
PNLT	76 • 6	80 •2	83 • 1	86.8	83 • 7	82.7	82.0	77.4	76.5

### TABLE B-III

#### NOISE LEVEL FREQUENCY SPECTRA TIME HISTORY

HUGHES 500 C

OCTOBER 28 1976

EVENT 106, 144 MPH FLY BY, MIC. 150 METERS EAST

1/3 OCTAVE FREQUENCY BAND VS TIME (SECONDS)
(DB RE 20 MICRO PA)

BAND	<b>-</b> 5 • 5	-4•0	-2.5	-2.0	-1 -0	0	•5	2.0	3•5	5.0
17	59 • 1	56 • 1	56-1	56.6	59-1	61.2	61 • 1	61.9	56-1	55÷6
18	59.8	59.0	61.6	62.8	64.3	65 • 7	68.4	67.8	62.3	60.0
19	70.5	70∙8	73 • 1	74.9	74.2	69 • 4	66.2	59 • 4	60.5	61.0
80	56.5	59.2	62.8	63.2	62.6	61.0	60 • 3	63 • 7	66.0	65.0
21	68 • 6	73.3	72.7	71.9	70.2	66 • 2	62.0	56.3	59.3	61 • 3
22	63 • 4	64 • 1	61.1	61-4	57 - 1	56 + 6	59 • 1	59 • 1	52.1	53 • 4
23	57.3	55.6	53.7	53 4	58 • 4	64.8	65.9	71.6	62.5	50.8
24	57.2	62.5	59.7	66.2	72.2	73.2	72 • 4	70 • 1	65 • 1	57.6
25	48.5	58 • 4	65.7	<b>58∙0</b>	68 • B	69 • 4	70.2	70 • 3	69.5	64.5
26	62.0	73.0	78 • 1	79.6	77.2	68 • 6	67.2	67.5	68.7	66.0
27	67 • 7	77 • 3	77.7	77 • 7	72 • 2	69 • 2	72.2	75.3	0.36	66.1
28	69.3	75.6	69.6	68 • 5	67 • 7	70 • 9	71 • 4	70 • 7	69.2	60.6
29	66.2	69•4	70.7	71.7	68•7	69 • 1	70 • 4	70 • 2	64.8	63.3
30	57.2	68 • 8	68•6	68 • 0	67.0	67.3	68 • 1	68.7	62.6	58.2
31	53 • 2	64.9	63•8	66.0	65 • 4	65 • 7	67.2	66.9	63.3	58 • 1
32	45 • 6	58•0	60•9	63•5	64 • 1	65•6	66•0	65 • B	61.0	55.8
33	40.7	51.0	58 • 5	61 - 1	61 • 8	61.6	61 • 7	60•9	56.1	50.8
34	35.0	44.2	51 • 0	54.6	55•6	56 • 1	57.8	56•7	51 • 4	45.5
35	35.0	37.6	45.3	48.3	50 • 0	52 • 3	53 • 8	52•7	47.3	40 • 4
36	35.0	35.0	38•5	41.7	43.5	45 • 7	47.0	47.1	41.2	35.5
37	35.0	35.0	35.0	35•4	36 • 4	38 • 7	40 • 4	41.6	37.6	35.0
38	35•0	35.0	35.0	35.0	35•0	35.0	35 • 4	35.6	35.0	35.0
39	35.0	35.0	35•0	35.0	35.0	35.0	35.0	35.0	35.0	35.0
40	35.0	35.0	35•0	35.0	35.0	35 - 0	35•0	35.0	35.0	35.0
A	71 - 1	78.7	78•5	79.0	76.8	76•3	77.1	77 • 4	73.2	69•0
D	73 - 8	81.4	81.9	82.6	80 • 7	80.0	80.8	80.9	76 • 6	72.8
OASPL	77.1	82.4	83.0	83.8	81.7	80 • 3	81.0	81.5	78.1	74.4
PNL	80 • 4	87 • 4	88•5	89.9	88 • 5	86 • 3	86.9	86.0	83.3	79 • 5
PNLT	80 • 4	87 • 4	88.5	91.0	88•5	86•3	86•9	88.0	83.3	80.8

#### NOISE LEVEL FREQUENCY SPECTRA TIME HISTORY

#### HUGHES 500 C

OCTOBER 28 1976

EVENT 107, 144 MPH FLY BY, MIC . 150 METERS EAST

1/3 OCTAVE FREQUENCY BAND VS TIME (SECONDS)
(DB RE 20 MICRO PA)

BAND	-5.0	-4.0	-3.0	-2.6	-1.0	0	1.0	2.0	5•0
17	55 • 0	54.8	57.2	56•3	57.9	57.9	57.0	57.5	56 • 0
16	55.3	57.3	59.3	62.0	63.4	64.6	66.5	64+2	57∘7
19	68.9	69-3	71.9	73.0	71.6	67.3	61.0	58.9	61 • 4
50	58.6	61.5	60.6	60.6	60.2	57.5	56.4	60.7	65 • 4
21	71.1	72.9	70 • 5	68 • 3	66.2	60.5	58 · 2	59 • 3	58 • 7
55	61.4	59.6	59.6	57.2	53.0	60 • 0	63.0	63•2	51.5
23	51.7	52.9	51.0	54.8	61.0	64.7	71.4	75 • 8	57.6
24	57.5	55.5	60.8	69.9	74-1	72.8	69.8	68-2	62.3
25	52 • 1	60.9	65+6	68 • 9	68.2	67 • 3	65.7	63 • 4	66.9
26 23	63 • 3	72.8	77.1	78.0	73.5	65 • 8	69.9	71.6	65 • 1
27	67.8	75.8	76.8	72.2	65.1	69.4	71.3	70 - 6	34.1
28	65 - 4	69.3	65.8	67.4	69.0	69 • 3	69.2	68 • 2	65.2
29	58 • 1	66 • 0	72.3	71.2	66 • 1	69 • 0	68 • 8	67 • 1	60.9
30	58 • 5	65.0	65.2	62.3	64.5	67.3	67.9	66.2	60 • 4
31		57.4	62.0	59.7					
	53 • 6				63 • 1	65 • 1	65.5	64 • 4	57 • 1
32	47 - 8	53 • 6	56 • 1	57.9	62.0	65 • 0	63.9	62.8	55 • 6
33	45.0	48.5	50.5	53 • 1	58 • 1	59 • 6	59.7	57 • 7	51.4
34	45.0	45.0	45.7	49.5	52.9	55 • 7	55.7	53 - 4	47.5
35	45+0	45.0	45.0	45 • 3	47.9	50 • 8	51.6	49 • 6	45.0
36	45.0	45.0	45.0	45.0	45.0	45 • 9	46.9	45.2	45.0
37	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0
38	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0
39	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45+0	45.0
40	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45-0	45.0
A	68 • 9	<b>7</b> 5•2	77.4	76.8	74.7	75 • 4	75 • 8	75 • 4	69•3
D	72.9	78 • 4	8C • 4	80 • 2	78 • 7	79 • 1	79 • 6	79 • 7	73 - 8
OASPL	76.6	80 • 3	81.7	81.2	79.8	79•6	80 • 7	80•9	75•4
PNL	80.6	86.0	87.5	88 - 1	86•3	85 <b>- 7</b>	86-1	86•3	80 • 6
PNLT	80.6	86.0	89.8	90.2	87 • 4	85 • <b>7</b>	86.1	86•3	80-6

### TABLE B-III.

### NOISE LEVEL FREQUENCY SPECTRA TIME HISTORY

HUGHES 500 C

OCTOBER 28 1976

EVENT 108, 150 MPH FLY BY, MIC. 150 NETERS EAST

1/3 OCTAVE FREQUENCY BAND VS TIME (SECONDS)
(DB RE 20 MICRO PA)

BAND	-7.0	-5•5	-4•0	-2.5	-1 -0	0	<b>⋄</b> 5	2.0	3.5	4.5
17	57.2	56.9	57.6	56.6	58•4	62.5	62.8	60+5	57.5	57•3
18	57.2	59.0	57.5	60.0	64.5	67.3	69 • 4	65-4	61.7	57.1
19	69.9	70.8	73.2	74.4	73.4	68.0	64.8	64.4	63.3	64 • 1
20	56.8	57.1	60 • 4	64.6	63.7	63.6	65 • 1	69 • 8	69.2	64.6
21	66.6	65.8	72.5	74.3	70 - 2	63.3	59.2	60 - 1	53.5	61.3
22	57.0	61 - 1	65.5	63.8	59.9	56.8	57.5	56 • 3	56.2	55.8
23	55.3	58.5	59.3	55.7	59.5	66 • 1	69.9	71 • 7	57.0	54.2
24	63.8	58 • 8	62.9	58 • 5	72.6	72.2	71.2	68•3	62.9	56.2
25	49.9	49.7	58 • <b>7</b>	67.5	70 • 6	73.3	73 • 6	71 - 6	69.2	63.2
25	56.4	62.5	73.5	79.6	76 • 7	70.3	69 • 1	69.9	70.6	65•7
27	63.3	68•9	78.2	80.8	71 • 6	71.1	73•7	71 • 1	67.7	67.8
28	64 • 1	70.4	77 • 8	76 • 7	70 • 5	74.5	74.0	72.0	66+2	60 - 2
29	65.0	67 • 1	72.8	72 . 4	69.0	70-6	70.8	67•9	65•8	61.5
30	59.0	59•6	69.0	72.6	68.2	69 • 4	68.0	65.2	61.6	58•9
31	49.7	53.0	69 • 8	68 • 1	66.0	67.8	67.7	64-4	61 • 1	57.1
32	46.0	48 • 8	63 • 1	65.3	64.9	66 • 4	66.2	64.2	60 • 0	54.8
33	45.0	45 • 5	58 • 4	60 • 8	62 • 4	62.3	62.0	57.8	54 • 6	50 • 4
34	45.0	45.0	51.6	54 • 1	56 • 4	57.1	57.3	54.8	51.3	46 • 6
35	45.0	45.0	46.1	49 • 5	52.8	54.2	54 • 4	51.3	46.4	45.0
36	45.0	45.0	45.0	45•9	47.5	48 • 3	48 • 6	46.8	45.0	45.0
37	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45 • 0
38	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0
39	45.0	45 • 0	45.0	45.0	45.0	45.0	45 - 0	45 • 0	45.0	45.0
40	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45•0
A	68.9	72 • 4	80 • 2	81.9	77 • 4	78 • 3	78•3	75•8	73 • 1	69 • 3
D	71.8	75.2	83.0	84.8	81.3	81.6	81.8	79.9	77.0	73.2
OASPL	76.3	78 - 1	83.7	85.5	81.8	82.3	82.6	81.0	78 ÷ 3	75.0
PNL	79.2	85.5	89.6	91.6	89+2	88.5	88 • 4	86.6	84-1	81.0
PNLT	80 • 3	82.2	90•8	91 • 6	89.2	89.7	88 • 4	86•6	84.1	81.0

### TABLE 8-VI

### NOISE LEVEL FREQUENCY SPECTRA TIME HISTORY

HUGHES 500 C

TO STATE OF STREET

OCTOBER 28 1976

EVENT 109, 150 MPH FLY BY, MIC. 150 METERS EAST

1/3 OCTAVE FREQUENCY BAND VS TIME (SECONDS)
(DB RE 20 MICRO FA)

BAND	-6.5	~5•0	-3 • 5	-2.0	5	0	1.0	2.5	4.0	4.5
17	56.8	57 • 5	57 • 0	55•6	59 • 8	60.9	60 • 1	59 • 2	57.8	57.9
18	59.9	60 • 0	59.9	62.9	64.3	66.5	69.3	64.1	62 • 4	61.3
19	68 • i	67.9	72.0	73.3	69 • 4	67.8	63.6	61.3	62+3	62.9
20	56 • 4	57.8	62 • 1	61.6	60.8	59.7	62.1	68.2	68 - 1	67.2
21	67.8	70 • 7	72.6	69.8	63.7	60.0	57•4	57.1	60.0	60.9
22	61.0	60 • 9	61.0	58 • 5	55.9	60.2	64.3	61.5	52.8	52 • 4
23	55•4	52 • 2	55 • 4	54.9	63.7	66.7	74.0	74.1	61 • 4	55.0
24	58 • 4	58∙5	53 - 5	71.5	74.6	73.5	71.0	68.8	65 • 5	63 • 4
25	48.0	58,9	64.6	70.0	69.7	69.7	69.3	69.4	69.3	67.7
26	58.6	66 • 4	77.8	80.6	72.8	67.5	69.7	68.0	67.9	67.6
27	67.7	74.8	79.4	76.8	67.2	70.5	73 • 7	73.0	64.9	64.7
28	69•4	74.6	73 • 4	68.2	70 • 4	69.8	70.0	69 - 1	67∙€	66+5
29	65•7	68 • 8	72.4	73.9	68.2	69.3	71.2	70.0	62 • €	62 • 7
30	54.5	66 • 6	72.1	65•9	66°6	67.2	68 <b>· 7</b>	66.2	62.8	61.9
31	55.3	63 • 3	66•0	64.7	65.5	65.8	67.5	65.2	59•3	53.0
32	49.3	54.7	64.3	62.1	64.4	65.2	65•9	64.2	58 • 4	57.0
33	46.8	48 • 4	57.8	60.3	61.0	60.8	60.7	57.9	53 • 1	52 • 5
34	45.0	45.0	51.5	54.5	56.2	56.6	57.1	53.9	49 • 6	48.9
35	45.0	45.0	46 • 4	49.6	52.7	53.0	52.7	50.5	45.1	45 • 1
36	45.0	45.0	45.0	45.6	47.3	47.7	47.9	46.2	45.0	45•0
37	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45•0
38	45.0	45.0	45 • Q	45.0	45.0	45.0	45.0	45.0	45.0	45 • 0
39	45.0	45.0	45 .0	45.0	45.0	45.0	45.0	45.0	45.0	45.0
40	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0
A	71.0	76.5	80 • 7	79.8	75.2	76.5	77.9	75.9	71 • 9	71 - 0
D	73.9	79 • 4	83.3	83.4	80.2	80.2	81.7	79.6	<b>75•8</b>	74.5
OASPL	77.0	80 • 4	83.6	83.9	80.6	81.0	82.5	81.2	77•7	76•6
PNL	81 • 4	85•7	90 • 0	90.7	87.0	86,6	88.0	86.9	82.7	82•U
PNLT	82.5	86 • 8	90 • 0	93.0	87 • G	86•6	88.0	86.9	24.0	82.0

### NOISE LEVEL FREQUENCY SPECTRA TIME HISTORY

HUGHES 500 C

OCTOBER 28 1976

EVENT 110: 130 MPH FLY BY, MIC- 150 METERS EAST

1/3 OCTAVE FREQUENCY BAND VS TIME (SECONDS)
(DB RE 20 MICRO PA)

DAND	-9•5	-7.5	-5.5	-3.5	-1.5	0	•5	2.5	4.5	7.0
17	54 • 4	53 • 5	54.5	56 • 8	58 • 1	60 • 4	59 • 4	58•3	54 • 1	55•2
18	56.7	56 · 8	57.7	60.2	63 • 6	67.7	68 • 8	60.0	58 • 4	53.9
19	66 • 6	68.3	70.0	71.3	71.5	64.8	62.7	58.8	59.2	58 • 5
80	56.2	57.6	59.2	63 • 3	64.5	60.7	61.0	63.9	65.5	63 • 1
21	65 • 4	68.7	71.3	71.8	70.2	61.9	58.0	57.0	61.5	60 • 1
22	55 • 1	59.5	61.9	58 • 7	55 • 1	55 • 6	58.0	55,5	51.4	55 • 4
23	54.0	56.7	53 • 8	52 • 4	60.5	65.0	65•3	67.7	52.8	58 • 4
24	60 • 8	59.3	61.0	56.6	73.8	72.0	70.3	66.8	58.8	50 • 4
25	48 - 1	49.8	52.6	65•9	68.9	69.0	70 • 1	70.9	65.5	54 • 6
26	57.5	60 • 1	64.3	75•7	73.7	65•7	65 • 5	65.3	68 • 6	59 • 4
27	59.5	69 • 2	72.3	76.5	68 • 5	69•6	71.4	69.7	64.9	63.9
28	63.2	70.7	73.4	69∙€	67.0	71 • 1	71.4	68 • 8	63.5	61.2
29	60 • 7	68.5	68.9	69.9	65.7	69 • 1	71 - 0	66.7	63.3	54.1
30	52.2	56 • 4	62.5	66.6	64.5	66 • 2	66•4	63.8	59.4	56•6
31	45.4	53 • 4	61.0	60.8	64 • 1	65 • 6	66 • 4	64.0	58.9	54 • 1
32	45-0	47 • 7	51.9	56.8	63.5	65.2	64.4	60.9	57.1	50.7
33	45.0	45.9	45.5	51 • 4	57.4	59 • 1	60.0	57.2	51.8	46 • 1
34	45.0	45.0	45•0	47 • 1	52•9	55•5	55•8	52.4	48 • 3	45.0
35	45.0	45.0	45.0	45•4	48 • 6	51.7	52 • 4	49 • 1	45.0	45.0
36	45.0	45 • 0	45.0	45.0	45 • 0	46.5	46.8	45.2	45.0	45+0
37	45.0	45.0	45 (0	45.0	45.0	45.0	45.0	45.0	45.0	45.0
38	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45+0
39	45 • 0	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0
40	45.0	45.0	45.0	45.0	45-0	45.0	45.0	45.0	45.0	45.0
A	65 • 3	72.5	75.3	76.9	75.2	75•5	76 • 1	74.1	70.7	65.5
D	69 • 6	75.2	77.6	80 • 3	79 • 1	79.2	79•7	77.8	73.9	69•6
OASPL	73.7	77.2	79.4	81 • 4	80.2	79•9	80 • 4	78.5	75.5	71.5
PNL	77.5	82.3	84.6	87.2	86.7	86.0	86.3	84.4	81.7	77.9
PNLT	78.5	83 • 4	84.6	87.2	86 • 7	86.0	86•3	84.4	81.7	77.9

### NOISE LEVEL FREQUENCY SPECTRA TIME HISTORY

HUGHES 500 C

OCTOBER 28 1976

EVENT 56, 3 DEGREE APPROACH, CENTERLINE MIC. ( HARD SITE )

1/3 OCTAVE FREQUENCY BAND VS TIME (SECONDS)
(DB RE 20 MICRO PA)

BAND	-9•0	-7•0	<b>-</b> 5•0	-3•0	-1 •0	<b>-</b> •5	0	1.0	3.0	5•0	7.0
17	64.0	63.7	66.8	63.9	67.5	67.5	65 • 4	62.1	67.3	65.9	62.7
18	62.0	63 • 4	66.5	66•5	65.8	64.4	63.3	63.0	69 • 1	66.7	63.7
19	60.5	63 • 6	66.5	66.3	61.6	61.2	59.6	61.8	62.4	64.5	64.7
20	62.3	64.2	67.7	60.2	74.5	76.6	77.0	76.7	65.7	66.4	66.9
21	66.2	67 • 1	67.5	62.1	73.0	75.0	75.0	75 • <b>7</b>	67.5	59.6	62.7
22	53.3	53 • 8	60.2	65.6	69.9	70.2	71.0	71.5	68.2	62.9	58.0
23	52.2	58.0	65.3	72.1	73.5	71.5	67.8	68 • 4	75 • 4	70.3	57.3
24	55.9	64.9	70.9	77.2	71.7	68.0	65.3	66.9	65.6	64.2	59.1
25	63 • 5	70 • 1	68.0	64:4	78 :0	78:2	77:9	<b>77</b> • 5	71 - 6	67 - 8	63+9
2 <b>6</b>	63.9	68•6	64.2	69.1	73 + 1	74.5	75.5	75.0	71.8	62.5	63.5
27	64 • 4	66.6	62.2	69.1	70 • 6	70.9	70.6	70.1	70 • 5	67.8	54 • 4
28	57•7	61 • 1	64.4	65.8	70.8	71.2	70 • 8	70.3	68 • 1	64.2	55•5
29	56 • 8	60 • 9	58 • 4	63 • 4	66.9	67.6	68 • 1	68.5	66.8	61.6	53 • 7
30	55.2	57 • 8	56.4	61.3	64.8	65•7	66-1	66.6	63.7	56.7	50.8
31	54.2	58 • 1	55 • 5	58•6	62.7	64.3	65.0	64•B	60.8	53.8	48.4
32	46.6	51.2	52.0	56 • 6	61.7	62.9	63.5	63•3	58.5	51.4	47.4
3 <b>3</b>	45.0	48 • 5	50•5	54.5	59.2	60 • 0	59.9	60.2	55.5	48.3	45.5
34	45.0	45.2	48.7	53.0	58 • 6	58 • 9	58.0	5 <b>7•</b> 8	51.7	45.9	45.0
35	45.0	45.0	45.6	49.6	56 • 1	56.7	55.8	55.0	48.3	45.0	45.0
36	45.0	45.0	45.0	47.1	51.8	52 • 3	51.6	51 • 1	45.6	45.0	45.0
37	45.0	45 • 0	45.0	45.2	47.7	48 • 6	49.0	48.2	45.3	45.0	45.0
38	45.0	45.0	45.0	45.0	45.3	45.5	45.4	45.0	45.0	45.0	45.0
39	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0
40	45.0	45.0	45.0	45.0	45 • 0	45.0	45.0	45 • 1	45.0	45 • 1	45.0
Α	66 • 4	70 • 7	69•6	74.2	77.3	77 • 8	77.7	77.7	75•0	70.4	63.8
D	71 • 0	75 • 1	74.9	78•9	82.2	82.4	88.5	82.3	79•4	74.9	70 • 4
OASPL	77 • 4	79 • 4	80 • 6	82.6	86 • 1	86.2	85• <b>7</b>	85.2	82.6	79•8	77 • 1
PNL	78 • 6	82.0	82.5	86•6	89•8	90 • 1	89.8	<b>39•7</b>	86.4	82.0	77.9
PNLT	78•6	83.2	83.9	86.6	89.8	90 • 1	89.8	89 <b>•7</b>	86.4	82.0	77.9

### THOLE B-III

### NOISE LEVEL FREQUENCY SPECTRA TIME HISTORY

HUGHES 500 C

OCTOBER 28 1976

EVENT 58, 69 MPH FLY BY, CENTERLINE MIC. ( HARD SITE )

1/3 OCTAVE FREQUENCY BAND VS TIME (SECONDS)
(DB RE 20 MICRO PA)

BAND	-14-5	-12.0	-9.5	-7.0	-4.5	-2.0	0	•5	3•0	5•5
17	56.7	59.2	56.0	59.6	62.2	59 • 7	56+6	59.7	61.2	59.6
18	57 • 5	58.2	59.0	61.8	62.9	65 • 5	59 • 7	58 • 3	64.0	65 • 3
19	62.8	61.8	62.5	63.2	64.0	60 - 1	57.8	57.8	58+3	58 • 5
20	60 • 5	60.5	61.0	62-8	60 • 3	67.9	75.6	75.5	66+3	61.8
21	66•5	66 • 1	67 • 1	67.8	60 • 8	68.5	72.1	71.5	65.8	56.2
22	50 • 8	53.7	54.7	52.0	58 • 8	64.3	66.8	66.8	64.3	58.3
23	51.8	52.6	51 • 4	59.4	65 • 5	71.0	64.2	64.1	70.7	66 • 5
24	60 - 5	60.9	53.9	67.4	73 • 1	72.3	63.6	63.6	61.0	59.4
25	46 • 8	55•7	64 • 6	68 • 4	61 • 1	74.6	76.3	76.0	72.8	59.0
26	48.8	59 • 8	64 • 4	68.0	60.2	67.5	73.4	73.3	67.0	58 • 3
27	56 • 7	69.3	68 • 5	65 • 8	67 • 4	66 - 1	69 • 4	68.7	67.8	60.9
28	58.7	68 • 3	58 • 5	70 • 6	60 • 3	65.8	68.4	68 • 1	64-3	56 • 7
29	54•7	58.9	58 • 6	68.2	59 + 2	61.8	66.8	66.8	62 • 3	53.2
30	48.9	55•9	56.7	65•4	56 • 3	59 • 7	63.3	63.2	60 • 4	50 • 5
31	45 • 1	52.7	52.4	62.7	53.5	57.7	62.3	62.4	58 • 4	48 • 4
32	45 • 0	47 • 2	47 • 4	56 • 1	54.6	55 • 5	60.8	61.3	56 • 4	46-9
33	45 • 0	45.0	45 • 6	51.8	49.0	53.7	57.7	58.0	53.5	45.2
34	45.0	45 • Q	45+0	47.4	47.1	52.6	55.5	55 • 1	49.9	45.0
35	45.0	45 • 0	45.0	45.0	45.0	49.8	53.2	52.6	45.9	45.0
36	45 • 0	45.0	45.0	45.0	45.0	46 • 3	48.4	47.7	45.0	45.0
37	45.0	45 • 0	45.0	45.0	45 • 0	45.0	45.5	45.7	45.0	45.0
38	45 • 0	45.0	45 • 0	45.0	45.0	45.0	45.0	45.0	45.0	45.0
39	45 • 0	45.0	45 • 0	45.0	45 • 0	45.0	45.0	45-0	45.0	45.0
40	45.0	45.0	45.0	45 • 0	45.0	45.0	45.0	45.0	45.0	45.0
A	61.5	69.8	68 • 2	74.1	69 • 5	74.0	76.0	75.8	72.3	63 • 8
D	<b>36 - 5</b>	72.4	71.9	77.2	74.6	78.7	80.7	80.5	77.0	68.9
OASPL	72.2	75 • 1	76.0	79.4	78 • 4	81.4	82.9	82.6	79.2	73.6
PNL	75.0	80.8	80 • 4	84 • 1	82.5	85.8	87.8	87.6	84.3	77.4
PNLT	76 • 3	82 • 4	80 - 4	85•3	83•7	85•8	87.8	87.6	84.3	77 • 4

### TABLE B-JI

#### NOISE LEVEL FREQUENCY SPECTRA TIME HISTORY

#### HUGHES 500 C

OCTOBER 28 1976

EVENT 50, 69 MPH FLY BY, CENTERLINE MIC. ( HARD SITE )

1/3 OCTAVE FREQUENCY BAND VS TIME (SECONDS)
(DB RE 20 MICRO PA)

BAND	-15.5	-12.5	-9.5	-6.5	-3.5	<b></b> 5	0	2.5	5•5
			_		0.0	*5	U	2.0	3•3
17	64.5	63.2	62.7	64.9	64.3	66.2	67.6	64.3	64.1
18	63 • 1	60 • 4	61.8	63.3	66 • 8	62.6	63.8	64.2	64.9
19	63 • 1	63 • 1	63.5	65+3	65.2	59.8	61.4	57.4	58 • 8
20	63.3	62 • 8	62.6	63.6	62 • 1	75.2	75.4	68 • 2	63 • 6
21	65.7	66 • 5	68.0	65.9	64.3	73.3	73.3	67.3	57.8
22	57 • 7	56 • 7	56 • 8	54.6	62.7	67.7	66.4	64.9	56 • 6
23	58.0	54.8	53.5	61.2	68 • 6	64.0	63.6	71.2	64.6
24	63 • 4	60 • 0	57.3	69.5	74.4	62.8	63.2	61.2	59 4
25	54.3	54 • 6	67.2	67.3	63 • 4	75.8	76.1	72.9	61.6
26	54 • 1	56 • 4	67.3	64.2	63 • 7	73.0	73.6	64.9	56.5
27	61.0	62.5	69.3	61.2	64 • 4	68.9	68.5	66.6	62 • 4
28	58.3	61.2	58 • 8	65•6	62.2	67.6	67.7	61.8	56.9
29	51.8	52 • 4	59.8	57•9	59 • 4	65.7	65.9	61.3	53.9
30	45.5	51.3	55.3	59.9	57.3	62.5	62.8	58 + 9	50.8
31	45.4	47 • 0	51 • 1	54.6	54.5	61.7	62.2	56.9	49.1
32	45.0	45 • 0	46.4	48.9	53 • 1	60.7	61.2	55.9	47 - 8
33	45 • 0	45 • 0	45.2	47.0	51 • 8	57.2	57.7	53.6	45.5
34	45.0	45 • 0	45.0	45.5	50 • 4	55.5	55.4	50.0	45.0
35	45.0	45•0	45.0	45.0	47.9	52.6	52 - 1	45 - 8	45.0
36	45.0	45.0	45.0	45.0	45.7	49.3	49.2	45.0	45.0
37	45.0	45 • 0	45.0	45.0	45.0	47.5	47.4	45.0	45.0
38	45.0	45 0	45.0	45.0	45.0	45.0	45.0	45.0	45.0
39	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0
40	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0
A	62.5	63 • 8	70.3	69•3	70 • 2	75.7	75.9	71.5	64-1
D	68.5	68 • 5	74 • 1	74 • 1	75 • 9	80.3	80.5	76.6	69.3
OASPL	75.9	75.9	77 • 4	78 • 8	79.9	83.1	83-4	79 . 4	74.3
PNL	76.6	77.2	81.3	81.2	84.0	87.5	87.7	84.1	77.5
PNLT	76 • 6	78 • 4	81.3	83.2	84.0	87.5	87.7	84.1	77.5

### TABLE B-II

### NOISE LEVEL FREQUENCY SPECTRA TIME HISTORY

### HUGHES 500 C

OCTOBER 28 1976

EVENT 60, 110 MPH FLY BY, CENTERLINE MIC. ( HARD SITE )

1/3 OCTAVE FREQUENCY BAND VS TIME (SECONDS)
(DB RE 20 MICRO PA)

BAND	-13-0	=10.5	-8-0	<del>-</del> 5•5	-3.0	<b></b> 5	0	2.0	4.5	5+0
17	64.6	63.6	62.4	63 • 4	62 • 3	66.2	65 • 4	65•7	67•6	67.2
18	60 • 4	60.7	60.3	62.8	62 • 3	63.8	61.9	66 • 4	65 • 1	65 • 1
19	64 • 1	65.9	66.5	67.6	64.6	61.3	60 • 3	61.9	61 • 5	62.3
20	59 • 8	60 • 0	59.9	60 • 8	59 • 4	76.0	75.0	62 • 3	61.6	62.5
21	64.0	67 - 1	67.5	68.9	63.9	74.5	73.5	64.0	58.9	59.3
22	56 • 6	56.5	54.9	56 - 4	61+1	66.4	66.6	63.9	56 • 4	55.2
23	54•4	52.2	51.8	54.0	64.4	64.0	65.8	70 • 1	57.3	55 • 1
24	60 • 8	56.5	53 • 4	65 • 8	76.8	63.3	63.4	59 • 5	60 • 5	59.9
25	51 • 6	53 • 6	56 - 1	64 • 1	64.0	75 • 4	76.0	65.6	63.7	62.4
26	53 • 2	61.4	65.5	72.6	68.2	73.9	73.4	65 • 8	54.3	54.8
27	60 • 0	63.7	67.1	65.3	70.4	69.9	68.5	66.5	57-1	53 • 4
88	58•4	63.9	63.1	60 • 1	66.8	67.9	68.5	63.5	57.3	55.8
29	53 • 1	54.7	53 • 1	64.2	63.3	66.0	66.4	61 • 1	51.7	51.3
30	45 • 3	47.4	53.2	54.9	58.7	62.8	62.8	57.9	51.2	51.2
31	45 • 0	46.5	46.9	51.6	56.5	61-2	61.2	55.9	48 • 2	47.6
32	45.0	45 • 0	46.5	48 • 4	54.2	59.4	59.6	54.1	46.0	45.7
33	45.0	45.0	45.0	45.5	50.4	56 • 5	56.8	51.3	45.0	45.0
34	45 • 0	45.0	45.0	45.0	48 • 4	54.9	55.0	48.0	45.0	45.0
35	45.0	45.0	45.0	45.0	45.7	51.9	51.8	45 • 7	45.0	45.0
36	45.0	45.0	45.0	45.0	45.0	49.3	48.5	45.0	45.0	45.0
37	45.0	45 • 0	45.0	45.0	45.0	46.1	46.3	45.0	45.0	45.0
38	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0
39	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0
40	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45 • 1	45.0	45 • 1
A	62•0	66 • 1	68.0	71.1	74.0	75.9	75.8	70.0	62.9	62.0
D	67 • 3	<b>70 •</b> 0	71.7	75.9	78.3	80 • 4	80.2	74.4	66.6	68.0
QASPL	76 • 5	76.0	76.7	79.8	81.0	83.7	83.0	79.5	78 • 6	78 • 4
PNL	75.7	77.9	79.4	83 + 2	85.5	87.4	87.5	81.7	76.9	76.2
PNLT	75•7	79.4	80.5	85•j	85.5	87.4	87.5	81.7	78.0	77.3

### NOISE LEVEL FREQUENCY SPECTRA TIME HISTORY

### HUGHES 500 C

OCTOBER 28 1976

EVENT 61, 110 MPH FLY BY, CENTERLINE MIC. ( HARD SITE )

1/3 OCTAVE FREQUENCY BAND VS TIME (SECONDS)
(DB RE 20 MICRO PA)

BAND	0.8-	-6.5	-5•0	-3•5	-2.0	-•5	0	1 • 0	2.5	4.5
17	63 • 6	63.8	62.4	62.2	63.3	63.5	63-6	63.8	64.5	64.5
18	61 • 1	62.3	63 • 1	64.2	63.5	63 • 4	62.9	61.8	64.0	62.2
19	66.7	68 • 3	69.7	66.2	64.8	59 • 6	60 • 1	60.0	60.9	62.2
80	60 • 5	60.9	60 • 5	59.8	62 - 1	75 • 4	76.2	72.9	60.7	63 • 5
21	68.6	68.0	68.0	64.8	67.6	75 - 1	73.8	70 - 7	61.8	56.6
22	55.5	53.9	54.5	54.2	64.0	67.5	67.8	66.5	63.5	54.2
23	50.7	49.3	52.8	60.8	66.2	65 • 4	65.0	69.9	71.2	58.2
24	57.8	55 • 8	66.5	73.6	76.5	68 • 1	64.7	64.7	59 • 4	61.5
25	54.5	59.8	61.9	65.0	69.0	76.3	76.7	75.7	64.9	63.8
26	63.2	68.5	69.5	70.6	68.9	73-4	74-3	70-4	64=7	55.0
27	65 • 1	67.0	62.6	66.6	69.5	70 • 6	70 - 1	68 • 5	66 - 1	61 • 3
28	59.7	56 • 7	60 • 0	68 • 3	67.7	69 • 4	69.6	66.6	63.6	57.9
29	52.7	58•7	64.4	62.4	62.8	66.8	67.0	64.3	60 • 6	54.6
30	47.3	53.4	57.4	57.8	59.5	63 • 6	63 • 3	61.0	57.5	53.9
31	45.0	49.6	54.0	54.4	57.0	62.9	62.6	59+3	55.9	51 • 1
32	45.0	45 • 5	48.9	50 .8	54.9	60 - 1	60 • 7	59.0	53.2	47.5
33	45.0	45.0	46.7	48.8	52.2	57.3	57.4	56.2	51 - 1	45.2
34	45.0	45.0	45.0	45 • 2	50.0	55 • 2	55.2	52.9	47.3	45.0
35	45.0	45.0	45.0	45.0	47 • 1	52.6	52 • 4	49.3	45.0	45.0
36	45.0	45.0	45.0	45.0	45 · i	49.5	49.3	46.4	45+0	45.0
37	45.0	45.0	45.0	45.0	45.0	46.9	47.5	46.6	45.0	45.0
38	45 • 0	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0
39	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0
40	45.0	45+0	45.0	45.0	45 + 0	45.0	45.0	45.0	45 • 0	45.0
A	65•3	68•3	70.2	72.7	74 • 1	76.6	76.9	74-4	69.6	64 - 1
D	70 • 4	72.5	74.5	77.3	78.5	81.3	81 - 4	79.2	74.0	69.2
OASPL	7€ ∙3	77 • 4	78 • 8	79.4	81 • 1	83 . 6	83.8	81.6	77.6	74.3
PNL	78.3	80•3	81.8	83.6	86.0	86.2	88 • 3	86.8	81.7	77.3
PNLT	78.3	81.5	83.7	84.9	86.0	88 • 2	88 • 3	86 • 8	81.7	77.3

### NOISE LEVEL FREQUENCY SPECTRA TIME HISTORY

HUGHES 500 C

OCTOBER 28 1976

EVENT 65. 6 DEGREE APPROACH. CENTERLINE MIC. ( HARD SITE )

1/3 OCTAVE FREQUENCY BAND VS TIME (SECONDS)
(DB RE 20 MICRO PA)

BAMD	-10.0	-7 - 5	<del>-</del> 5•0	<b>-</b> 2.∙5	0	2.5	4.5	5•0	7•5	9•0
17	63.7	58-1	60.7	60 • 7	62.9	63.2	60.8	60•3	64.6	62 • 4
18	60 • 4	63 • 5	63.8	63.3	64.2	62.2	63.9	64.4	63+8	64.4
19	59 • 2	58 • 8	60 • 1	59.6	59.2	60.7	57.5	58 • 1	61 - 1	60.9
20	62 • 4	64.0	62.7	58.9	73.6	73.6	64.6	63.8	68.3	66.8
21	66.6	66 • 1	62.8	60.7	72.1	71.0	63.4	61.7	59.5	60.8
22	54 • 1	51.9	55.9	59.6	64+9	67.2	70.0	68 • 7	54.1	52 • 4
23	52.9	56 • 6	65.9	7C • 2	70.0	69.2	77.6	77.2	62.6	52.6
24	59•8	64.1	75.6	76.4	69.0	65.8	69.4	70.4	62 • 8	56.4
25	54.7	65.5	66.3	63.9	77.2	77.1	71.7	69.7	67.3	63.3
26	64.6	65 • 6	64.8	68.8	72.9	73.8	75.9	75.7	65.3	64.2
27	63 ∙ 6	62 • 1	69.5	70.2	73.9	70.9	72.3	71.5	62.0	58 • 5
28	57.3	66 • 2	68 • 8	69.6	71.8	72.3	72 - 1	72.4	66.5	58 • 1
59	52 <b>.</b> 8	64.0	67.9	64.0	68.2	63.8	73.2	73.0	59.3	56.3
30	50.6	60 • 3	61.5	61.3	65.0	66.0	67.6	67.8	56.6	58.5
31	51.7	53 • 1	57.5	58.9	63 - 1	64.7	63.8	53 • 7	52.4	50.8
32	46.4	49 • 8	53 • 7	56.7	60.7	63+3	59 46	59.5	48.7	46.9
33	45 - 3	46.7	51.4	53.7	<b>5</b> ε•6	60 • 7	55.5	55.2	47.3	45.3
34	45.0	45 • 1	48 - 8	50 • 6	56.2	57+5	52.0	51.6	45.7	45.0
35	45.0	45.0	45.0	47 • 1	54.2	54.3	48.0	47.8	45.0	45.0
36	45.0	45.0	45.0	45.2	49.3	49.3	45.4	45.4	45.0	45.0
37	45.0	45.0	45.0	45.0	45 • 6	46.2	45.0	45.0		45.0
38	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0
39	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0
40	45.0	45.0	45.0	45.0	45.0	45.0	45.2	45.0	45.0	45.0
A	65.6	70•6	73.5	74.1	77 . 7	77.6	78 - 1	77.9	69.3	65.2
D	71.2	73.9	77 - 7	78.4	81.8	81.9	81.7	81.2	73.9	70.3
JASPL	75.6	76 • J	80 • 4	81.8	84.4	83.5	83.5	83 • 1	78.9	76.3
PNL	78.5	81.4	85•2	85.9	88.9	89.0	88.7	88.4	80.6	78.2
PNLT	79.5	83 - 1	85•2	85•9	88•9	89•0	89.8	88.4	82.5	79.2

## TABLE 8-VI

#### NOISE LEVEL FREQUENCY SPECTRA TIME HISTORY

HUGHES 500 C

OCTOBER 28 1976

EVENT 83. 9 DEGREE APPROACH. CENTERLINE MIC. ( HARD SITE )

1/3 OCT../E FREQUENCY BAND VS TIME (SECONDS)
(DB RE 20 MICRO PA)

BAND	-11-5	-9.0	-6.5	-4.0	-1.5	0	1.0	1.5	3•5	6.0	6.5
17	59.9	59 • 3	60 • 7	60 • 6	63 • 6	62.8	63.4	62.8	61 - 4	63.0	63.6
18	60.8	59.8	60 • 3	58.9	65.0	63.7	65.3	65.6	64.8	64.7	64.0
19	59.4	59 • 1	57.3	58 + 2	63.2	58 • 8	59.0	59.3	58 • 4	60.7	60.2
20	58-6	58•2	58 • 8	58.9	69.5	75.2	74.6	73.0	62.2	68.0	68 • 4
21	64.2	64 • 2	63 • 8	62.9	73.0	73.3	71.6	70.8	63.0	63 - 1	64.2
22	51.9	52.0	54.0	60.7	67.6	66.5	68-1	68.5	62.9	54.8	54.4
23	54.1	58.0	61-2	67.6	70.8	67.2	70.0	72.1	74.4	58 - 7	57.0
24	63 • 8	68.6	71-4	75.8	74.4	67.0	69.0	69.3	65.9	60.5	57.7
25	65.9	65.7	68.8	61 • 4	76.9	77.0	78.2	78.3	65.3	65.3	63 • 4
26	65 • 4	65.7	60 • 9	66,7	72.1	75.5	74.5	72.7	70.6	63.3	63.7
27	60 • 6	53 • 6	62 • 8	69.6	72 2	73.1	71.5	72.4	69.5	58 • 5	57.7
28	62 - 9	59.9	63.0	67.7	7i•6	72.0	72.9	72.7	66 • 8	61-9	55 - 6
29	60.0	53 • 5	59.6	63.3	68 • 0	69.3	69.9	70.1	64.6	57.5	56.3
30	57 • 5	53 • 3	54 • 5	60.5	65.3	66.6	66.8	67.3	61.9	55.6	54.8
31	53 • 6	49 - 0	51 • 4	57.2	62.7	64.0	64.6	64.9	60.5	52 • 6	52.5
32	46.8	46 • 6	48 • 4	54.5	60 • 3	61.2	62.3	63.5	57.9	51 • 1	49.8
33	45 • U	45 • 1	45.5	51 -4	57.9	59.1	60.4	61.4	54.5	48.0	46.7
34	45.0	45.0	45.0	48 • 5	56 • 1	57.2	57.2	58.7	51 • 1	45.7	45 - 1
35	45 • 0	45.0	45.0	45.4	53.3	54-4	54.2	55.3	47.5	45.0	45.0
36	45•0	45.0	45.0	45.0	48.9	49.3	49.6	50 • 7	45.2	45.0	45.0
37	45•0	45.0	45 • 0	45.0	45.8	45.6	46-1	47.2	45.0	45.0	45.0
38	45 • 0	45 + 0	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0
39	45 • 0	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0
40	45.0	45.0	45.0	45.0	45.0	45.2	45.0	45.0	45.0	45.0	45.0
Α	68 • 3	66 • 5	67 • 8	73.1	77.6	77.9	78 • 3	78 • 3	73.8	66 • 6	64.8
D	72 • 4	78.5	73.2	77.6	81.8	82.3	82.7	82.8	77.9	71.6	70.5
OASPL	75.0	75.9	77 - 1	80.6	84.8	85.0	84.5	84.1	79.8	76.0	76.3
PNL	79.4	79.2	81.0	85.0	88 • 9	89.2	89.8	90.1	84.9	79.0	78 • 4
PNLT	79.4	81.4	81.0	85•0	88.9	89.2	89.8	90 • 1	84.9	80•3	78 • 4

#### NOISE LEVEL FREQUENCY SPECIFIA TIME HISTORY

HUGHES 500 C

OCTOBER 28 1976

EVENT 104. 130 MPH FLY BY. CENTERLINE MIC. ( HARD SITE )

1/3 OCTAVE FREQUENCY PAND VS TIME (SECONDS)
(DB RE 20 MICRO PA)

BAND	-14-5	-11.5	-8+5	-5•5	-2.5	U	•5	3•5	6•5	8 • 5
17	53 • 4	53.3	54.4	54.4	55+9	54•4	54•7	53•0	56.6	54•6
18	55 • 1	57.3	57.4	5€ ∙0	57.5	56 • 4	55.0	58 - 1	58 • 6	55 • 2
19	63 - 0	67 • 8	68+8	67.3	59.9	54 • 4	54.2	51.3	56 • 6	56.7
20	52.8	55 • 8	56•8	55.2	56.5	73 • 1	73.5	58.3	57 • 4	57.5
21	62 • 9	67 • 7	69.4	64.8	66.9	71.3	69.8	62 • 1	51 • 0	54.0
22	50.7	56 • 3	56 • 8	49.9	61.5	64.4	63.9	60.7	50 • 0	49 • 4
23	48.0	50 • ೮	48 • 8	55•4	62.6	58 • 1	56 • 8	66.8	54.8	46.9
24	58.2	57 • 1	60.0	71.5	74 - 4	59 • 8	60.2	55.8	57-1	53 • 6
25	45 ∗0	53.7	58 • 4	62.4	65.8	70.2	70 • 1	65 • 6	59 • 4	59 • 3
26	48.7	65•5	71.0	73.3	70.3	70 • B	72.2	64.2	50•9	54 • 1
27	58.9	64.∙5	67.0	62.9	64.7	68.3	68.0	64.3	58 - 6	47.9
26	57 • Û	61 •Û	54.3	67.6	65.8	65 • 4	64.9	60.8	53 • 7	52 • 6
29	52.0	53.7	55•9	62.3	60 • 7	63 - 1	63.5	58 • 8	49.5	48 - 3
30	45.0	48.2	49.6	59.2	57.3	62 - 1	62.0	56.0	47.7	47.1
31	45.0	45.0	45.5	52 • 1	54-1	60.8	60.5	54.4	46.6	45.0
38	45.0	45.0	45.0	48 - 1	51.5	58 • 8	58 • 6	52 • 1	45.3	45-0
33	45.0	45.0	45.0	45.7	47.5	55+2	55.2	49.5	45 • C	45.0
34	45.0	45.0	45.0	45.0	45 - 4	52.9	52 • 4	46.0	45.0	45.0
35	45.0	45.0	45.0	45.0	45 • U	47.9	47.6	45.0	45 • 0	45.0
36	45.0	45.0	45.0	45.0	45.0	45 - 1	45-1	45.0	45.0	45.0
37	45.0	45.0	45.0	45.0	45 • C	45.0	45 • C	45.0	45.0	45.0
38	45.0	45.0	45.0	45.0	45 • 0	45.0	45.0	45.0	45 • 0	45.0
39	45.0	45.0	45.0	45.0	45 ~ 0	45.0	45.0	45,0	45.0	45.0
40	45-0	45.0	45.2	45.0	45.0	45.0	45.0	45.0	45.0	45.0
A	60.0	66 • 3	68 - 7	72.4	71.9	73 • 1	73 - 1	67.9	60.2	58 • 2
D	67.0	71 - 1	73.3	76.6	76.5	77.3	77•3	72.5	67.i	66.3
OASPL		75.0	76-8	78 • 4	78.5	79.9	79 • 8	73.8	67.8	66 • 1
PNL	74 - 3	78.5	<b>91 • 3</b>	83.7	83.7	84.6	85.0	79.5	74.3	73 • 4
PNLT	75.3	78 - 5	82.6	85.4	83.7	84.6	85•0	79.5	74.3	74.9

## TABLE 8-VI

### NOISE LEVEL FREQUENCY SPECTRA TIME HISTORY

HUGHES 500 C

OCTOBER 28 1976

EVENT 105, 130 MPH FLY BY, CENTERLINE MIC. ( HARD SITE )

1/3 OCTAVE FREQUENCY BAND VS TIME (SECONDS)
(DB RE 20 MICRO PA)

BAND	=18.0	-14-5	-11.0	-7.5	-7.0	-4.0	-•5	0	3.0	6•5	8•6
17	56+6	55.9	57 -3	60 • 9	59 • 9	60+2	60 • 5	60.7	59.4	59.6	59.0
18	66.8	64.0	66.7	64 • 4	63.7	63.2	57.4	58 • 5	60.7	59.2	57.3
19	60.9	61.3	64.6	65.5	66 • 2	61.8	57.0	57.6	59.4	56 • 1	57.6
20	55.7	57 • 4	57 46	57 • 1	56 • 6	54.3	73.0	73.4	62.0	57.9	59.2
21	63.9	66 - 6	66.9	66 • 4	65.9	59.1	71.0	71.0	65.0	53.4	53.8
22	52.4	<b>52</b> <sub>2</sub> 8	53 • 1	50 • 9	49 - 8	57-1	64.3	65 • 1	62 • 1	48.7	46.5
23	52.0	50.0	48.7	54.4	55 • 4	61 + 6	57.6	56.8	67-1	55.7	48.2
24	8.09	59.0	54.2	68 • 9	70.3	74.8	59+0	60 • 1	57.8	59.7	55.4
25	47.4	47 - 1	57.1	66∙ა	66 • 4	58 • 6	70.2	70 • 2	68 - 1	62 • 1	59.4
26	52.4	52 • 4	65.0	74.2	74.7	64-1	70 - 1	71.5	64.9	53.5	54.0
٤7	53.0	55.6	65 • 4	64.2	62 • 7	69.9	57 <b>•</b> 2	67.0	64.9	60.9	48 - 8
28	53.9	55 - 1	60.2	64 • 6	66.3	60.8	64.8	65.7	62.7	58.2	52.8
29	48 • 4	47 - 0	50 • 9	61.3	61.6	59.3	62 • 1	63•4	60 • 4	53.4	48 • 1
30	45.0	45 • 0	48.4	53 • 5	55 • 7	54.7	59.7	61.0	57.1	51.0	47.2
31	45.0	45.0	45.0	47.5	49.0	51.0	59•0	59.6	55.0	49.4	45.0
32	45.0	45 ^ 0	45.0	45.0	45.0	48.5	56.6	57.1	53.6	47.3	45.0
33	45.0	45 • Ú	45 ±0	45 • 0	45.0	45.4	52-3	52.8	50.3	45.2	45.0
34	45.0	45 • 0	45.0	45.0	45 • 0	45.0	49.2	50.0	46.8	45.0	45.0
35	45.0	45.0	45.0	45 • 0	45.0	45.0	45.5	45.6	45.0	45.0	45.0
36	45.0	45.0	45.0	45.0	45 • 0	45.0	45.0	45.0	45.0	45.0	45.0
37	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45-0	45.0	45.0	45.0
38	45.0	45.0	45 • 0	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0
39	45.0	45.0	45.0	45 • 0	45.0	45.0	45.1	45.0	45.0	45.0	45.0
40	45.0	45.0	45.0	45.0	45.0	45.0	45.5	45.0	45.0	45.0	45.0
Α	57.9	58 • 8	65 • 4	72.3	72.9	71.5	72.C	72.8	68.8	63 - 4	58.2
p	66.9	67 • 2	70•6	76.3	76 • 9	75 • 8	76.2	76.7	73.9	68.9	66.3
OASPL	70.8	71.5	74.2	78.0	78.3	77 • 8	79 • 2	79•5	75•4	69.7	67.2
PNL	74.0	74.4	7E • 3	83.9	84.2	82.9	83.7	84.5	81.1	76.0	73.5
PNLT	75.0	74.4	78.3	83.9	85•6	82.9	83.7	84.5	81-1	76.0	75.0

#### NOISE LEVEL FREQUENCY SPECTRA TIME HISTORY

#### HUGHES 500 C

OCTOBER 28 1976

#### EVENT 106, 144 MPH FLY BY, CENTERLINE MIC. ( HARD SITE )

# 1/3 OCTAVE FREQUENCY BAND VS TIME (SECONDS) (DB RE 20 MICRO PA)

BAND	-6•5	-5 • 0	-3.5	-2.0	<b>~•</b> 5	o	1.0	2.5	4.0
17	56.0	59.3	61.2	65.0	64.3	64.4	60 • 3	59.7	62.0
18	58 • 1	59.3	61.8	63.4	64 1	64-1	62.8	64.7	63.5
19	72.7	74 • 1	76.8	73.8	63.2	60.5	60 • 0	59.3	62.9
50	59 • 4	60.5	62.3	59.3	67.5	74.8	77-1	62.0	63.7
21	73 - 7	73.9	74.4	69.8	76.8	77.9	75 • 7	65.5	57.0
22	64.9	65 • 6	64.4	56.7	71 - 1	71.9	70 • 3	66.3	53.0
23	59•6	57 • 8	53 • 6	60.8	67.9	67.1	68 • 6	70.5	56.8
24	68 • 6	62 • 7	68.0	77.9	77.8	74.5	68 • 1	64.3	64.6
25	53.0	54.7	62.5	64.9	73.5	74.9	76-8	70.3	67.9
26	56 + 1	70 = 0	77.1	75-6	76.9	77.3	75.7	68.9	61.6
27	66•9	71.6	74.2	72.3	74.1	74.2	73.0	70.6	63.1
28	66 • 1	67 • 7	64.0	71.5	71.0	71.6	71.3	65.5	63 • 3
29	61.7	59 • 6	63.6	67.4	69.2	69.8	69 • 8	65.0	58 • 4
30	52 • 3	56 • 8	59.3	64.5	66.1	67.5	67.6	61.7	55.5
31	49.8	55.0	55 • 1	60 • 4	64.4	67.2	67.7	60.5	53.8
32	43 • 3	47 . 9	51.8	56.9	63.4	65.9	65 • 8	58 • 9	52.2
33	38 • 1	44.8	48.2	54.3	8.09	62 • 7	63 • 1	56.2	49.7
34	35.0	37.5	42.0	49.7	58.0	60 • 8	61 • 7	53.8	46.0
35	35•0	36 • 3	37.3	46.6	55.8	57 • <b>7</b>	57.6	49.5	42.1
36	35.0	35 • 8	35.0	41.2	50.7	53 • 5	54.1	46.4	38.2
37	35.0	36 • 3	35.0	36.4	47.0	50 • 6	51.9	43.9	36.8
38	35 • 0	36 • 7	35.0	35.0	44.0	46.7	46.9	38.9	36.8
39	35•0	36 • 3	35.0	35.0	40.7	43.8	44.5	35.9	38-1
40	35•0	38 • 3	35.0	35.0	39.9	42.0	41.7	35.2	39.3
A	69•3	72.3	75 • 4	76.8	78.3	79.1	78 • 6	73.3	68.0
D	73 - 7	76 • 1	79.6	80.9	82.8	83.4	83 • 1	77.2	72.4
OASPL	78 • 8	80 • 4	83.4	84.3	85.3	85.7	85 • U	78 • 6	74-1
PNL	79 • 6	82.7	86 • 4	87.2	90.2	91.2	90 • 4	84.6	79.4
PNLT	80 • 6	82 • 7	86•4	87.2	90.8	91.2	90 • 4	84.6	79.4

#### NOISE LEVEL FREQUENCY SPECTRA TIME HISTORY

#### HUGHES 500 C

OCTOBER 28 1976

EVENT 107. 144 MPH FLY BY, CENTERLINE MIC. ( MARD SITE )

1/3 OCTAVE FREQUENCY BAND VS TIME (SECONDS)
(DB RE 20 MICRO PA)

BAND	-10.5	-8•5	-6.5	-4.5	-2.5	5	0	<b>i</b> • 5	3•5	6•0
17	51.5	54 • 1	54 • 7	57.8	59 • 4	62.3	60•9	57+3	59 • 8	60.9
18	54+2	55.8	55.2	58 + 5	60 - 7	59.9	59 - 1	55.9	62 • 1	58 • 4
19	65.0	68.3	70.2	72.5	72.1	62.8	60.6	58 • 4	59 • 3	59 • 6
20	56.2	57.4	57.2	59.4	58.2	63.4	71.8	76.7	57.9	62.0
21	68.9	70.0	69.9	72.8	70.2	73.4	76.4	75 - 1	59 • 5	58 • 1
22	57.7	59.2	59.7	61.2	54.5	67.3	68•6	69.3	63.9	48.9
23	52.4	54.6	53.3	52 • 4	57.8	66.8	66-4	65.2	68 • 9	48.3
24	64.9	64.9	60.2	61.7	75.9	77.8	75 • 7	65.9	61.9	60 - 1
25	47.9	50 • 0	52 • 1	61.4	65 • 2	72.7	75.0	75.8	65 • 7	64 • 6
26	50 • 3	60 • 1	65.3	75.0	77.2	74 • B	75 • 4	75•7	<b>65</b> •8	62 • 4
27	56∙რ	64.6	68 - 4	73.5	67.0	71.6	71.7	71.5	68.9	58 • 8
28	62.2	64.3	63 • 8	64.6	70 • 0	69.8	70 • 6	69 • 6	64.2	58.0
29	62 - 1	61.7	55.5	59.7	66•3	67 • 7	68 • 1	68 • 4	62.6	55.2
30	50 • 8	51.3	51.6	55.0	63 • 1	63.3	65.2	65.7	60 • 4	50 • 6
31	45.1	50.2	48.3	48.7	58 • 1	61 + 2	62.8	63.9	58 • 8	49.5
32	45.0	45.0	45.0	46.8	54.2	60•5	61.6	62.3	56 • 1	47.8
33	45.0	45.0	45.0	45.5	51.2	<b>57</b> •3	58 • 4	59+2	53 • 4	45.1
34	45.0	45.0	45.0	45 • C	46 • 5	55•0	56.7	56.8	50•3	45.0
35	45 • 0	45.0	45.0	45.0	45.0	51.5	52.9	53 • 4	47.2	45.0
36	45.0	45.0	45.0	45.0	45.0	47.6	48.9	50.2	45.8	45 • 0
37	45.0	45.0	45.0	45.0	45.0	45.0	46.3	47.9	45.0	45.0
38	45.0	45.0	45.0	45.0	45.0	45.0	45 • 1	45.0	45.0	45.0
39	45•0	45 • 0	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45+0
40	45 • 0	45.0	45+0	45.0	45.0	45.0	45.0	45 • 0	45.3	45.0
A	65 • 5	68.5	69.8	74.2	75.8	<b>76•</b> 8	77.3	77.3	71.2	64.4
D	70.2	72.0	73 • 1	78.0	80 • 4	81 - 4	81.7	81.6	75 - 1	70 • 1
OASPL	73 • 5	75.5	77.2	80.6	82.5	83.5	83 • 8	83.9	76+2	71.8
PNL	77 - 1	79 • 1	80.5	84.9	87.3	83.4	89.0	89.C	82.7	77.3
PNLT	78.7	79-1	80 • 5	84.9	88 - 4	88 • 4	89.0	89•0	82•7	77•3

### NOISE LEVEL FREQUENCY SPECTRA TIME HISTORY

HUGHES 500 C

OCTOBER 28 1976

EVENT 108, 150 MPH FLY BY, CENTERLINE MIC. ( HARD SITE )

1/3 OCTAVE FREQUENCY BAND VS TIME (SECONDS)
(DB RE 20 MICRO PA)

BAND	-6•5	-5 • 5	-4.5	-3.5	-2.5	-1.5	-+5	0	•5	3•0
17	60 • 3	60 • 5	61.9	62•6	63 • 4	64.6	64.5	63.0	61 • 0	61 • 8
18	61.2	60 • 4	60.0	60.6	68.8	64.5	64.2	62.3	59 • 1	60 • 4
19	73.9	75.2	75.8	76.6	76.5	73.2	67.5	67.1	67.5	68 • 3
20	60 iz	80 • 5	61.6	62.7	62.2	60.3	75.9	79 • 1	79 • 4	63 • 6
21	73.0	73.7	74.8	75•6	73.5	70.7	79.8	79.8	78 • 4	57.6
22	63.4	64.5	65.0	64.2	59.1	65.7	72 • 4	72.6	72.5	60 • 2
23	58•9	58 • 5	57 • 1	55•6	61.6	67.4	69.0	68 • 1	68 • 2	63 - 4
24	65+6	63 • 5	61.9	71.2	78.5	81.2	77.6	72.7	69.5	66•0
25	52.6	54.0	58 • 1	63.5	66.2	67.9	75.2	76 • 8	77.1	69-1
26	64.3	68.7	74 • 1	78•5	<b>78 •</b> 8	77.1	78.9	78.9	77.4	63 • 1
27	68 • 6	71.9	74.5	75.0	72.2	76.7	76.2	76•8	75.2	68 • 5
28	68•3	68 • 8	67.0	64 • 4	71.4	72.6	73.2	73.2	73.8	66.5
29	65.0	62 • 7	58 • 5	65.2	67•5	70.3	72 • 1	72.6	72 + 4	61.9
30	56 • 7	55•6	56.9	57•9	63.5	66.5	68•9	69•9	69•6	59 • 4
31	54.9	54.5	51.5	54.9	59.5	63.8	67.6	68•9	68 • 7	57.2
32	47.6	47.0	48,9	53.9	57.9	61 • 4	65.8	67.2	67.3	55.2
33	45 • 1	45 • 1	46.4	52.3	55•9	59•4	63.6	64.7	64.2	52 • 6
34	45.0	45.0	45.0	46.9	50.6	56 • 1	61.0	62.3	62.3	49.2
35	45.0	45.0	45.0	45.2	47.4	53.0	59.0	59.8	59 - 1	46 • 4
36	45.0	45 • 0	45.0	45.0	45.0	48.7	54.1	55.5	55 • 1	45 • 6
37	45.0	45.0	45.0	45.0	45.0	46.2	51.8	53.3	53 • 6	45.0
38	45.0	45 • 0	45.0	45.0	45.0	45.0	48.8	50.3	50 • 1	45.0
39	45.0	45.0	45.0	45.0	45.0	45.0	46.6	47.9	47.9	45.0
40	45.0	45 • 0	45.0	45.0	45.0	45.0	46.3	46.9	46.7	45 0
A	72.0	73 • 2	74.6	76•6	78.0	79.4	80.1	80.7	80 • 3	71 - 1
D	75 • <b>7</b>	76•9	78.5	80.9	82.4	84.0	84.9	85 • 3	84 • 6	75 • 5
OASPL	79.4	80.7	82 - 3	84.2	ಕ5∙4	86.6	87.0	87.2	86.7	77 - 1
PNL	82.2	83 <b>•7</b>	85•2	88 • 2	89.4	90 • B	92.7	93.0	92.2	82.6
PNLT	82.2	83 • 7	85•2	89•5	89•4	90 • 8	92.7	93•0	92.2	82•6

## TABLE 8-VI

## NOISE LEVEL FREQUENCY SPECTRA TIME HISTORY

#### HUGHES 500 C

OCTOBER 28 1976

EVENT 109, 150 MPH FLY BY, CENTERLINE MIC. ( HARD SITE )

1/3 OCTAVE FREQUENCY BAND VS TIME (SECONDS)
(DB RE 20 MICRO PA)

BAND	-14-0	-11-5	-9.0	-6.5	~4.0	~1 ° 5	Û	ì • O	3•5	4.0
17	51.3	57 . 3	57.7	58.5	60.5	63.5	62.6	59.4	61.2	60 • 6
18	54 • 4	57.9	57.5	59 • 4	62 - 1	64.6	62 • 3	58 • 8	59.9	58.7
19	58.2	62.9	69.1	72.6	74.9	70 • 7	56.6	58.7	59.4	60.0
50	51 • 5	56 • 6	57.3	60 • 3	61.0	57.2	75.4	77.6	58+8	60 • 1
21	60 • 9	66 • 1	70 • 4	73.7	73.5	67.6	78.9	75.9	58 • 3	54.9
22	55•3	56.6	52.4	63 - 1	61 • 6	63 • 5	70.9	71.6	63.0	59 • 1
23	56 • 0	53.4	56.7	57.2	52.3	66 • 6	67.5	66.4	65.9	62.0
24	69•3	68 • 5	67 • 1	65 • 1	66 • 6	80.8	72.5	67.4	65 • 4	65.2
25	57.0	54.3	52 • 1	52.0	61.2	66 • 1	74.6	75.2	66.0	67.5
86	63 • 5	64 • 3	57 • 8	65.0	76.0	<b>75 = 3</b>	77.1	76.1	65.3	60.6
27	52.6	55 • 6	68.3	69.4	72.9	77.3	74.5	73.6	68 • 4	67.1
28	48 • 1	64 • 4	65•7	65 • 7	61 • 3	71.9	71.6	71.8	64.9	62.6
83	54.9	65 • 1	67.0	60.5	62 - 1	70 • 9	71.0	70.9	62.0	59.5
30	53•5	62.7	62.0	52.0	54.7	65•2	69•0	68 • 4	59.2	56.5
31	48.6	56.0	52.7	51.2	51 °8	62.2	65•7	66.0	57.5	55-1
32	43.5	46.3	48 • 6	45 • 4	48 • 9	60 • 4	64.1	64.7	55.0	52.5
33	43.5	45.0	45 - 1	45.0	46.3	57.9	61.5	61.5	52 • 7	50 • 4
34	43.5	45.0	45.0	45.0	45.0	53.7	59.2	60 • 1	49.8	47.4
35	43.5	45.0	45 · C	45.0	45 • 0	50 • 4	56.4	57.0	46.2	45.3
36	43.5	45.0	45 • 0	45.0	45.0	46.3	51.6	52.2	45.2	45.0
37	43.5	45.0	45.0	45.0	45 • 0	45-0	48.9	50.2	45.0	45.0
38	43.5	45.0	45.0	45.0	45.0	45.0	46.3	46.8	45.0	45.0
39	43.5	45-0	45.0	45.0	45 • 0	45.0	45.3	45.2	45.0	45.0
40	43.5	45.3	45.0	45.0	45 • 3	45.0	46.1	45:9	45.0	45.3
A	64•3	70.2	71.2	70•9	74 • 4	79.2	79.4	78 • 8	70-8	69.0
D	70.5	72.8	73.4	74.7	78 • 6	83.3	83.3	32.9	75.0	73 - 5
OASPL	72.3	74-8	77.0	79-3	81.8	85.3	85.0	8.45	76 • 1	74.7
PNL	78.2	80.0	80.8	81.9	85 • 7	89.9	90.8	90.3	82.3	80.8
PNLT	79.5	81.3	81.8	81.9	87 • 1	89.9	8•09	90.3	88.3	8.08

HUGHES 500 C

# NOISE LEVEL FREQUENCY SPECTRA TIME HISTORY

OCTOBER 28 1976

EVENT 110, 130 MPH FLY BY, CENTERLINE MIC. ( HARD SITE )

1/3 OCTAVE FREQUENCY BAND VS TIME (SECONDS)
(DB RE 20 MICRO PA)

BAND	-14-0	-11.5	-9.0	-6.5	-4.0	-1.5	0	1-0	3+5	4.5
17	55.3	54.3	55 • 4	56•8	58 • 5	62.3	60.8	59 • 8	59 • 8	61.0
18	56 • 6	54.8	58.0	58-9	59 • 8	62.4	60.6	57.9	62.4	61 • 4
19	62.4	65.6	69.5	72 - 4	72.3	66.4	59-2	60.4	59 • 1	60 - 1
20	55 • 4	57 • 6	58 • 6	60 • 3	60 • 3	59 • 1	76.7	78 • 7	60.3	63.2
21	65.5	69.9	71.8	72.8	72.6	66 • 7	78 • 4	75.9	58 • 7	56 • 4
22	56+2	59.3	61 +8	62.1	59 • 1	63 • 3	71 • 0	69.2	61.7	53.7
23	51 • 6	54.3	55.8	56.6	53.3	65.5	66.6	66.7	68 • 5	58 • 5
24	64.3	67.4	68 • 4	63.2	71.0	78 • 7	72.1	67.8	63-1	63 • 1
25	51.7	52.0	51.2	56 • 1	64.8	65.9	75.2	76.3	65.0	66.7
26	62•6	61.3	53.5	69 • G	77.1	72.6	75.5	76.5	63.4	59 - 4
27	50 - 9	58+0	63.8	71.5	71.1	74.5	73•B	73.9	68 • 4	63 • 8
28	61.8	60 • 1	63 • 4	68.3	63.2	69.9	71 - 4	70.8	64.3	62.7
29	63•7	60 - 7	60 • 5	59•4	66.2	68 • 4	68.9	69.2	61.3	57.7
30	59 • 1	57.0	51.3	54.3	57.9	64 • 1	65.8	66.0	58.8	56.0
31	52 • 1	49.5	45.0	50.9	54.9	60.5	64.5	65.5	56.6	53.2
32	45 • 4	45.0	45.0	45 • 8	51 • 6	58 • 7	63.0	63.6	54.7	51 .8
33	45•0	45.0	45.0	45.0	48 • 4	55 • 4	60.3	60.6	51.9	48.7
34	45.0	45 • 0	45.0	45.0	45.0	52.5	58•3	58 • 4	48 - 8	45.8
35	45.0	45.0	45.0	45.0	45.0	49.4	54.9	55•6	45.7	45.0
36	45•0	45 • 0	45.0	45.0	45.0	45.9	51.7	52.4	45.0	45.0
37	45•0	45.0	45•G	45.0	45.0	45.0	49.2	50.5	45.0	45.0
38	45 • 0	45.0	45.0	45.0	45.0	45.0	46.3	46.7	45.0	45.0
39	45.0	45.0	45.0	45.0	45.0	45 - 0	45.1	45.3	45.0	45.0
40	45.0	45 • 0	45.0	45.0	45.0	45 · î	45.0	45.0	45.0	45.0
Α	67•5	66 • 4	67 • 7	72.8	74•7	76 • 6	78 - 1	78 • 3	69 • 6	67.4
D	70 • 6	71.2	72•6	76.2	79•3	81.3	82.5	82.5	74.2	72.2
OASPL		74.8	76.9	79.4	81.4	83 • 4	84.8	85.0	75 • 5	73.6
PNL	78 • 1	78.9	79.5	83-1	86.7	88 • 1	89.8	90.2	0.58	79 • 4
PNLT	80 • 0	78•9	79.5	83 • 1	88 • 5	88 • 1	89.8	90.2	82.0	79 • 4

#### NOISE LEVEL FREQUENCY SPECTRA TIME HISTORY

HUGHES 500 C

OCTOBER 28 1976

EVENT 106. 144 MPH FLY BY. CENTERLINE MIC. ( SOFT SITE )

1/3 OCTAVE FREQUENCY BAND VS TIME (SECONDS)
(DB RE 20 MICRO PA)

BAND	-7.5	-6 • Ó	-4.5	<del>-</del> 3•0	-1.5	0	1 - 5	3 • 0	4.0
17	55.2	56 • 4	56∙6	58 • 9	63 • 1	61.7	60.0	55 <b>•7</b>	53.2
18	56 • 1	56.6	57.9	59.2	62.6	63 • 6	61.7	61.7	61.9
19	68.2	69.8	70.9	73.0	73.7	67.5	57.6	57.2	59.5
20	56.0	56.0	56 • 8	57.2	57.9	64.3	74.5	63 • 1	60.7
21	70.9	70.2	69.5	68.2	65 • 5	74.3	74.7	66.7	53.2
22	61.2	59.5	57 • 0	52.3	58 • 1	68•0	70 • 3	65.9	58.2
23	52.0	49.2	49.9	55.2	61.8	67.1	68 • 6	68 • 7	62.0
24	58.0	65.9	68 • 2	71.0	77.8	77.2	65.7	63 • 1	64.2
25	54.5	58 • 1	59.3	60 • 6	64.4	71.5	76 - 1	70.7	65 • 8
26	70 - 3	73.2	73.5	73.9	73 • 4	76 - 1	72.6	69 • 1	62.9
27	67.3	72.4	69-8	66.3	72.2	72.8	71.6	70.3	68 • 1
28	63.1	67.4	61.2	60.8	69.5	71.0	70.9	65.9	62.7
29	58.5	59.2	58.3	60 • 4	65.9	69 • 1	69 • 2	64.5	59.3
30	52.7	59.5	56 • 7	52.7	62.0	66 + 3	67.8	60.8	56.9
31	48.8	55.0	48.7	49.7	57.2	65 • 1	67.3	59.7	55 • 6
32	41.9	45.7	44.5	45.8	54.5	63.9	67.3	58 • 5	53 • 1
33	35.8	39.9	39.3	41.9	51.0	60 • 2	63+3	55.0	49.5
34	35.0	35.0	35.2	37.0	46.3	57.9	60.8	52.6	45.9
35	35.0	35.0	35.0	35-4	43.2	56 • 5	59 - 1	48.8	42.7
36	35.0	35.0	35.0	3: •0	37.9	51.0	55.3	45.9	40.0
37	35.0	35.0	35.0	3 •0	35.0	49.0	52.3	44.6	37-1
38	35.0	35.0	35.0	35.0	35.0	43 • 3	48 - 1	38.5	35.0
39	35.0	35.0	35.0	35.0	35.0	37.8	44.0	36.0	35.0
40	35.0	35.0	35.0	35.0	35.0	36.8	41.1	35 • 4	35.0
A	69 • 3	73.2	71.7	71 - 4	75 • 5	78.0	77.9	73.0	69.3
D	73.5	76.8	75.8	76.3	79.9	82.2	82.4	77.0	73.3
OASPL	76 • 6	78.7	78.8	80 • 1	83.0	84.0	83.5	77.7	74.1
PNL	80 .2	83.0	82.5	82.8	86.3	89.5	89.7	84.2	80.4
PNLT	80 • 2	83.0	82.5	82.8	86•3	89.5	89.7	84.2	80.4

#### NOISE LEVEL FREQUENCY SPECTRA TIME HISTORY

### HUGHES 500 C

OCTOBER 28 1976

EVENT 107. 144 MPH FLY BY. CENTERLINE MIC. ( SOFT SITE )

1/3 OCTAVE FREQUENCY BAND VS TIME (SECONDS)
(DB RE 20 MICRO PA)

BAND	-11.5	-9•0	-6•5	-4.0	-1 •5	Ō	1-0	3 • 5	6 - 0	6-5
17	49.0	50 • 9	53.5	56 • 1	57 • 6	59.5	58.2	54.8	59.3	58 • 8
18	52 • 5	52 • 1	55•7	56.9	62 • 3	59 • 2	56.5	57.9	57.7	57 • 1
19	60 • 8	64 • 1	68 • 5	70 • 7	70 • 4	65.3	56.6	56 • 6	59.5	58.9
20	50•9	54 • 4	56.7	55.7	54 • 5	64.8	75.2	61.5	60.3	59.6
21	62.3	67 • 2	69.4	66.7	62.6	73 - 1	75.9	63 • 6	53.8	54.2
22	53.3	56•7	57.7	51.0	58 • 7	66.9	69.1	63.7	49.1	47.1
23	46.9	50•3	49.2	52.2	62 • 4	65.5	63.2	68.0	52.2	49.0
24	48 • 6	53.2	64.3	68 • 8	77 • 7	75 • 9	67.6	60.7	61.9	59.9
25	50 • 0	56 • 4	57.6	59.0	63.2	71 - 3	75.2	67.5	64.3	63.0
26	62.2	69.0	70 • 2	71.5	72.8	73 • 3	73.5	56.3	59.8	60.3
27	64 • 3	69 • 1	68.5	65.9	73 • 6	70 • 8	70.7	67.2	58 • 8	56.8
28	64 • 7	65•3	61.0	<b>58•7</b>	67 • 7	69 • 2	68.8	63.3	61 - 1	57.3
29	61.3	57.9	52 • 9	58 • 8	64•5	66 • 1	67.4	62.2	55.6	55.0
30	50.5	52.0	53.5	50 • 6	59.2	63 • 4	65.7	59.4	53.3	51.5
31	45.0	50.5	46.3	45.9	54 • 3	62.6	65•7	58.4	52.4	51 - 1
32	45.0	45 • 9	45.3	45.2	51.9	61 • 4	63.7	55.6	49.9	48.6
33	45 • 0	45.0	45.0	45.0	49.0	57.1	59.2	52.7	46.5	45.2
34	45.0	45.0	45.0	45.0	45 • 8	54.8	56.8	49.3	45.1	45.0
35	45.0	45.0	45.0	45.0	45.0	52 • 1	54.3	46.5	45.0	45.0
36	45.0	45.0	45.0	45.0	45.0	48 • 7	50.8	45.0	45.0	45.0
37	45.0	45 • 0	45.0	45.0	45.0	45 • 7	47.7	45.0	45.0	45.0
38	45.0	45 • 0	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0
39	45 • 0	45•0	45.0	45.0	45.0	45 • 0	45.0	45.0	45.0	45.0
40	45.0	45•0	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0
A	67.2	69•9	<b>70.</b> 0	70.2	75.3	76.0	77.0	70.5	65.1	63.3
D	70.1	73.5	73.5	74.9	79.9	80.7	81.4	74.9	69.9	68.6
OASPL	71.2	74.9	76.4	77•9	81.8	82.2	83.1	75.7	71.2	69.9
PNL	77.7	80 • 7	81 • 4	82.0	86.2	3 <b>7 •</b> 5	88.2	82.0	77.5	76.4
PNLT	77•7	80 <b>• 7</b>	82.7	83 • 4	86.2	87.5	88.2	82.0	78 • 8	76.4

# TABLE B-VII 5 FOOT HOVER TEST

#### 1/3 OCTAVE NOISE LEVEL FREQUENCY SPECTRA

HUGHES 500 C

OCTOBER 28 1976

EVENT 94, O DEGREES, MICROPHONE 150 METERS WEST

1/3 OCTAVE BAND VS LEVEL (AVE OVER 19 SECONDS)
(DB RE 20 MICRO PA),

	ENERGY			ARITH.	STD	
BAND	AVERAGE	MAX	MIN	AVERAGE	DEV	
14	59.4	61.6	57 • 8	59.3	1 - 1	•
15	71.6	75.0	63.0	70.7	3.5	
16	64.6	66.7	60 • 4	64.3	1.6	270°
17	71 • 1	73-1	68.6	71.0	1.2	270° (Microphone La Relative to Ha
18	69.3	71.4	67.6	69.2	• 7	Microphone L
19	66 • 4	68.2	64.3	66+3	1.1	וויין אינויין אינויין אינויין
50	73.0	73.9	70.5	72.8	1 - 4	Relative + W
21	73 • 1	74.3	71.2	73-1	-8	LUCATIVE 10 LI
22	68.2	70.3	66 30	68.0	1 • 1	
23	69•7	72.3	63.7	69-1	2.6	
24	64 • 6	66 • 6	61.6	64.4	1 - 4	
25	71 • 3	74.3	67 • 4	70.9	1.9	
26	71.2	73.3	68 - 4	71.0	1 • 4	
27	70•9	73.2	67 • 1	70•6	1 • 8	
28	70 = 6	73 - 1	67.3	70 • 4	1.5	
89	68•5	70.3	65 • 5	68 • 2	1 - 4	
30	66 • 8	68-5	63 • 7	66 • 5	1.6	
31	64 - 1	65.7	60 • 9	63.9	1 • 4	
38	63 • 1	65.6	60 • 7	62.9	1.3	
33	59•7	62.6	55• i	59•3	1.8	
34	57 • 8	62.6	52.9	57.2	2.3	
35	55 • 1	58.9	50 • 8	54+5	2.3	
36	50 • 1	52.7	46.3	49•7	1.9	
37	46 • 0	47•7	45.0	45.9	•8	
38	45 • 0	45.0	45.0	45.0	•0	
39	45 • 0	45.0	45.0	45.0	•0	
40	45 • 0	45.0	45.0	45.0	•0	
DBA	76.2	77.6	73.7	76.0	1.0	
DBD	80 • 1	82 • 4	78.3	80.0	1.0	
OASPL	82.0	83.4	JO • 2	81.9	•8	
PNL	87 • 4	89.2	85.8	87.3	•9	
DAII T	07 A	70 A	05 0	07 0	•	

89.2 85.8 87.3

PNLT

87 - 4

## TABLE B-YIL

5 FOOT HOVER TEST

#### 1/3 OCTAVE NOISE LEVEL FREQUENCY SPECTRA

HUGHES 500 C

OCTOBER 28 1976

EVENT 95, 45 DEGREES, MICROPHONE 150 METERS WEST

1/3 OCTAVE BAND VS LEVEL (AVE OVER 19 SECONDS) (DB RE 20 MICRO PA)

	ENERGY			ARITH.	SŢD	
BAND	AVERAGE	MAX	MIN	AVERAGE	DEV	
14	59•3	61.9	56+5	59-1	1.5	
15	71.7	73.4	68 • 4	71 • 4	1.5	
16	62 • 3	64.5	58 • 6		1.6	22.50
17	66 • 0	\$ 66	63.7		1 • 3	<i>V</i> (40)
18	69.5	71-8	67.0		1.3	/ 10 1 - 1 -
19	65 • 4	66.9	61.2	65+2	1.5	Microphone Loc
20	74.4	76.6	71 - 4		1.5	
21	73.7	74.9	72.1	73 • 6	• 7	225° (Microphone Loc Relative to Hell
28	68 - 4	70 • 1	66 - 1	68 • 3	1.0	
23	69 • B	71.7	65 • 5		1 • 6	
24	66 • 5	67.9	64.2	66 • 4	1.0	
25	74 - 6	76 • 4	71.3		1.5	
26	78•5	80 + 6	73.9		1.9	
27	77•7	81.0	72.2		2.7	
28	76•7	81 - 4	71-0		2 • 8	
29	75 • O	80.3	70.5		2.5	
30	72 • 4	77.5	68•3	71-8	2.2	
31	72.1	77.8	66 • 6		2.9	
32	71 • 1	76.9	64.3	69.8	3 • 3	
33	66•8	72.6	58 • 8	65•6	3.2	
34	63+5	70 • 3	55.5	61.9	3.7	
35	60 • 3	67.2	52.6		3 • 8	
36	54.9	61.6	49.5	53 • 6	3.2	
37	48 • 6	54-1	45 • 6	48.0	2 • 1	
38	45 • 3	47.3	45 • 0	45.2	•6	
39	45 • 1	46.0	45.0	45 • 1	• 3	•
40	45.0	45.0	45 • 0	45 • Q	•0	
DBA	82.5	87.1	78.7	81.9	2.3	
DBD	85 • 7	90.3	81 • 6		2.2	
OASPL	85 • 6	88.88	82.9	85.3	1 • 6	
PNL	92.8	96.8	89.3	92.4	1.9	
PNLT	92 • 8	96.8	89.3	92.4	1.9	

5 FOOT HOVER TEST

1/3 OCTAVE NOISE LEVEL FREQUENCY SPECTRA

HUGHES 500 C

OCTOBER 28 1976

EVENT 97, 90 DEGREES, MICROPHONE 150 METERS WEST

1/3 OCTAVE BAND VS LEVEL (AVE OVER 19 SECONDS) (DB RE 20 MICRO PA)

	-						
BAND	ENERGY AVERAGE	MAX	MIN	ARITH. AVERAGE	STD DEV		
14	64+3	68•0	59•3	63•7	2.4	180° Microphone Relative to	
15	72 • 8	73.9	71.3	72.8	•6	, 40	
16	65 • 5	68+1	61.4	65 • 1	1.9	las is along	1 mating
17	66+1	68.7	63-3	65 • 9	1.4	Michobyone	Liocalian
18	69 • 2	73.9	64.8	68 • 4	2.5	look to t	Halianotar
19	66 • 3	70 • 1	63 • 4	66.0	1 • 7	Keletine to	Tellooliet /
20	78.2	79.9	76.7	78.2	•8		
21	74-2	77-1	71.8	74.1	1.0		
22	69.7	71.5	68.6	69.7	•8		
23	76.9	79.2	73.9	76.7	1 • 3		
24	69.6	71.7	67.1	69.5	1.0		
25	76.3	79 - 1	72.4	75.9	1.8		
26	77 • 3	79.9	74.7		1 • 4		
27	75 • 1	76.9	71.4		1.3		
28	73 • 7	76.4	71.1	73.4	1 • 4		
29	73.0	75-1	70 . 4	72.8	1.5		
30	70 • 8	73.5	67.3		1.8		
31	68 • 2	72.4	63 - 1	67.7	2.3		
32	66 • 6	70.2	62-1	66 • 1	2.2		
33	64-1	67 • 4	59 • 1		2.0		
34	61 • 8	64.3	56 • 5		2.0		
35	58.6	61.3	54.5		1.7		
36	53 • 5	56.2	49.2		1 • 7		
37	47.8	49.4	45.0		1.1		
38	45.0	45.0	45.0		• 1		
39	45.0	45.0	45.0		•0		
40	45.0	45.0	45 • 0		•0		
DBA	80 • 3	81.6	78 - 5		• 9		
DBD	84.3	86 • 1	82.5		•8		
OASPL	85 • 6	87.5	84 - 1		•8		
PNL	91 • 8	93.5	90 • 8		•8		
£ 1470	J . T.						

91.7

90.2

•8

93.5

91.8

PNL.T

#### 5 FOOT HOVER TEST

1

#### 1/3 OCTAVE NOISE LEVEL FREQUENCY SPECTRA

#### HUGHES 500 C

OCTOBER 28 1976

#### EVENT 98, 135 DEGREES, MICROPHONE 150 METERS WEST

# 1/3 OCTAVE BAND US LEVEL (AVE OVER 19 SECONDS) (DB RE 20 MICRO PA)

	ENERGY			ARITH.	STD	
BAND	AVERAGE	MAX	MIN	AVERAGE	DEV	
						135° (Microphone Location Relative to Helicopter)
14	57 • 9	61.5	52.2	57+2	2.5	700
15	70 • 7	71.9	69.5	70.6	•6	/ Munachone Location
16	56 • 6	58 • 4	54.8	56 • 4	1 • 1	MICROPHONE MOCATION
17	56+8	58•7	53.7	56•6	1.2	Dolotica + Holyanataci
18	65 • 1	69•9	60 • 5	64.3	2 • 4	KEIBLIVE 10 HELICOPIES
19	61.9	63 • 4	60.3	61.8	• 9	,
20	74.8	76.7	73.0	74•7	1.0	
21	73 • 5	75.4	71.4	73 • 4	• 9	
22	68•3	70 . 2	66•0	68 • 2	1.0	
23	71.1	72.7	69.4	71 - 1	• 9	
24	68 • 8	71.5	64.3	68•3	2.1	
25	76•0	79 • 4	70•9	75•4	2 • 3	
26	76 • 4	78•7	72.6	76 • 1	1 • 7	
27	76.0	79 - 1	70 • 4	75-4	2.4	
28	76•6	79•7	69•9	75•9	5.6	
29	75 • B	79•3	69 • 6	75 • 0	2 • 8	
30	73.0	75•9	64.7	71.9	3.4	
31	69•3	71-8	60 • 4	68•3	3 • 3	
32	67 • 2	71 - 1	58 • 6	65.8	3 • 7	
33	63 • 8	67•4	57•6	62 • 6	3.2	
34	60 • 9	64-3	56 • 1	60.2	2.5	
35	57 • 5	60 • 3	53+5	57 • 1	1.9	
36	52 • 0	54.8	49.0	51.7	1 • 8	
37	47.0	49.6	45.0	46.8	1 • 4	
38	45.0	45.0	45.0	45.0	• 0	
39	45.0	45.0	45.0	45.0	•0	
40	45.0	45.0	45.0	45.0	• 0	
DBA	81.5	84.4	76 • 1	80.9	2 • 4	
DBD	84.6	87.4	79.8	84-1	2.2	
OASPL	85 • 1	87.6	81.3	84.7	1 .8	
PNL.	91.5	94.0	87.4	91 - 1	1.9	
PNLT	91.5	94.0	87.4	91 • 1	1 • 9	

## TABLE B-YIL

#### 5 FOOT HOVER TEST

#### 1/3 OCTAVE NOISE LEVEL FREQUENCY SPECTRA

HUGHES 500 C

OCTOBER 28 1976

EVENT 99, 180 DEGREES, MICROPHONE 150 METERS WEST

1/3 OCTAVE BAND VS LEVEL (AVE OVER 19 SECONDS) (DB RE 20 MICRO PA)

	ENERGY			ARITH.	STD	
BAND	AVERAGE	MAX	MIN	AVERAGE	DEV	_
						90° (Microphone Lo Relative to Hel
14	60 • 7	64.0	55.0	60 • 1	2.4	,
15	73.0	73.9	72.1	73.0	•5	Microphone Lo
16	58 • 4	60 • 6	56 • 1	58•2	1 • 3	7,7,5,5
17	57 ° C	60.0	53.5	56•7	1 • 4	Relative to Hel
18	64+7	67 c 1	60-2		1.9	
19	60 • 5	63.8	58 . 5	60.3	1 • 3	
20	68 • 1	70.0	66 - 1	68.0	•8	
21	72.0	73.7	69.5	71.9	1.0	
22	66+9	68.7	65 - 1	<b>⊘6∙8</b>	• 9	
23	74.2	76.6	69-8	73.9	1 • 8	
24	68 • 0	70-1	65+6	67.8	1.2	
25	73.2	76.2	69.3	72.9	1 • 8	
26	75.7	77.8	72.4	75 - 4	1.5	
27	74 • 1	76 • 1	70.2	73.8	1 • 7	
28	74.4	76.3	69.5	74-0	1.8	
29	73.6	76.0	68 • 5	73.2	1.9	
30	71.3	74.4	66.5	70.8	2.0	
31	68 • 8	72.1	63.5			
32	66 - 4	70.0	61.7	65.9	2.1	
33	61.9	65.5	56.6	61.2	2 + 5	
34	58 • 5	63.2	52.6		2.6	
35	55 + 2	60.5	50.9	54 • 4	2.5	
36	49.6	53.5	46.9		1.8	
37	45.8	47 • 4	45.0	45.8	• 7	
38	45.0	45.0	45.0	45.0	•0	
39	45.0	45.0	45.0	45.0	•0	
40	45.0	45.0	45.0	45.0	•0	
DBA	79.9	82.6	75.9		1.7	
DBD	83.0	85-4	79.8	82.8	1.5	
OASPL	83.6	85.5	80.7	83+4	1.3	
~··~	~~~	00-0	~~ - 1		• • •	

PNL

PNLT

90 • 0

90.0

92.4

92.4 87.0

87.0

89.8

89.3 1.3

1.3

ocation dicopter

5 FOOT HOVER TEST

#### 1/3 OCTAVE NOISE LEVEL FREQUENCY SPECTRA

HUGHES 500 C

OCTOBER 28 1976

EVENT 100. 225 DEGREES. MICROPHONE 150 METERS WEST

1/3 OCTAVE BAND VS LEVEL (AVE OVER 19 SECONDS)
(DB RE 20 MICRO PA)

	ENERGY			ARITH.	STD	
BAND	AVERAGE	MAX	MIN	AVERAGE	DEV	
14	61 • 2	66 • 1	54•6	59+8	3 • 5	45° (Microphone Location Relative to Helicopter
15	73.6	74.7	71.5		• 9	
16	59•0	62.6	56.0	58•6	1.8	/ Microphone Location
17	57.6	60 • 6	54.5	57•3	1.6	1 2 1 1 1 1 1 1 1 1
18	66 • 5	68.0	64.3	66.5	• 9	Relative to Helicoples
19	60∙8	62.3	58.2	60.7	1.0	,
20	73.9	75.3	71.9	73.8	1.0	
21	70 • 7	72.2	68 • 5		1.0	
88	65 • 4	66.9	64.0	65•3	• 8	
23	72.5	74-3	70.7		•9	
24	65 • 7	67.2	64 · i	65 <b>-6</b>	•8	
25	73.5	75-4	70 • 3	73 • 4	1.2	
26	72.3	74.7	68.7		1.3	
27	72 • 4	75.2	70 • 4		1.2	
28	71 • 1	73.9	67.9		1.6	
29	70.0	73.2	66•3		1.6	
30	66.9	70.0	63.6	66∗5	1.7	
31	64.9	67.5	60 • 5	64.5	1.9	
32	63•6	66.8	59.4	63.2	1.9	
33	59 • 5	62.6	55 • 6	59.1	1.9	
34	57 • 4	60.8	52.0	57.0	1.9	
35	54.6	57.2	50.2	54.3	1.6	
36	48 • 9	50.8	46.7	48.8	1 - 1	
37	45 • 1	45.6	45.0	45.1	•2	
38	45 • 0	45.0	45.0	45.0	•0	
39	45.0	45.0	45.0	45.0	•0	
40	45 • 0	45.0	45.0	45.0	•0	
DBA	77 - 1	79 • 1	74.7	77.0	1.0	
DBD	81.0	82.5	79.0	80.9	• <b>8</b>	
OASPL	82.0	83 • 1	81 • 1	82.0	•6	
PNL	87.9	89.6	86.2		• 7	
PNLT	87.9	89.6	86.8		- 7	

5 FOOT HOVER TEST

#### 1/3 OCTAVE NOISE LEVEL FREQUENCY SPECTRA

HUGHES 500 C

OCTOBER 28 1976

EVENT 101, 270 DEGREES, MICROPHONE 150 METERS WEST

1/3 OCTAVE BAND VS LEVEL (AVE OVER 19 SECONDS)
(DB RE 20 MICRO PA)

BAND	ENERGY AVERAGE	MAX	MIN	ARITH.	STD DEV
	- · · · · · · · · · · · · · · · · · · ·				D4.V
14	59 • 5	62 • 8	53 • 8	58+8	2.6
15	71.9	72.9	70 - 4	71.9	•6
16	57 • 1	58.2	55 • 3	57.0	•8
17	56 • 8	<b>50-</b> 3	54.1	56.6	1 . 4
18	65 • 1	66.5	63.5	65.0	•7
19	59 • 8	62.0	58 • 3	59.7	1.1
20	78.2	79.8	77.3	78 - 1	•6
21	69.3	71 • 1	68 • C	69.3	•7
22	61.5	63.5	59.8	61.4	•9
23	75.3	76.5	73.8	75.3	•7
24	63.9	65+5	62.4	63.8	•8
25	74.3	76.7	72.4	74.1	1 - 1
26	74.2	77 • 4	71.5	73.9	1.7
27	72.6	77 + 1	66.5	71.8	2.5
28	72.0	76.4	66•6	71.3	2.5
29	71.5	75•7	66•4	70•8	2.4
30	68 • 4	73.5	62.5	67.5	2.8
31	66.3	70 - 4	60•9	65.5	2.7
32	65 • 1	68.9	60 • 5	64.4	2.4
33	60 • 0	64.2	55.2	59 • 4	2.3
34	58 • 1	62.6	53.0	57.2	2.7
35	56 • 6	61.0	51.7	55.8	2.7
36	50 • 6	53•9	47.1	50.2	1.9
37	46 • 2	48.4	45.0	46.1	• 9
38	45.0	45.0	45.0	45.0	•0
39	45.0	45.0	45.0	45.0	•0
40	45.0	45.0	45.0	45.0	•0
DBA	78.3	82.0	75•3	77.9	1.6
DBD	82.0	85.0	79.4	81.7	1.6
OASPL	83.5	85•9	82.0	83.3	1 - 1
PNL	89.1	91.8	86.8	88•8	1.4
PNLT	89.1	91.8	86.8	88•9	1 • 4

Microphone Location
Relative to Helicopter

5 FOOT HOVER TEST

¥

PNLT

90.5

92.0

86.5

90.3

#### 1/3 OCTAVE NOISE LEVEL FREQUENCY SPECTRA

HUGHES 500 C

OCTOBER 28 1976

EVENT 102, 315 DEGREES, MICROPHONE 150 METERS WEST

1/3 OCTAVE BAND VS LEVEL (AVE OVER 19 SECONDS)
(DB RE 20 MICRO PA)

	ENERGY			ARITH.	STD	
BAND	AVERAGE	MAX	MIN	AVERAGE	DEV	
					204	2150
14	58 • 8	63.0	52.8	57.8	3 • 0	315° (Microphone Loc Relative to Heli
15	70.7	72.6	68.5		1.1	/ Managhama / a
16	56 • 1	58 • 6	53.3		1 • 3	Michabyone 700
17	55 • 1	57.2	53.0		1 • 1	Rolatio to Heli
18	65 • 8	68 • 1		65 • 4	1+8	1/6/8//VE 30 //C//
19	59 • 1		57.7		•6	•
20	76.3	77.9	74.0		• 9	
21	70 • 7	71.9	68.7		• 7	
22	65•6	67.5	63 • 6		•9	
23	74 - 4	75.4	73.1		• 7	
24	64 • 6	65.8	63.3		• 6	
25	74 • 3	75.7		73 <b>- 7</b>	2 • 6	
26	75•5			75.2	1.6	
27	73 - 7			73 - 4	1.7	
28	69.5	71.9	67 • 7	69.4	1 • 1	
29	68 • 7	70.2	65.9	68•6	1 - 1	
30	72.9	75.9	66.2	72.3	2.4	
31	71 - 6		63-7		2.7	
32	67 • 3	69.6	61.4	66.9	2.0	
33	61.9	64.3	57.1	61-6	1.8	
34	59•0	62.8	54.4	58 • 4	2.2	
35	55•4	58 • 7	51.8	55 • 1	1.6	
36	50 • 7	52.8	47.3	50.6	1.3	
37	46 • 1	47.6	45.0	46 • 1	•8	
38	45 • 0	45.0	45.0	45.0	•0	
39	45 • 0	45.0	45.0	45.0	•0	
40	45 • 0	45.0	45•0	45.0	•0	
DBA	79 • 4	8ü•9	75-0	79.2	1.5	
DBD	82 • 9	84.2	78.9		1 - 4	
OASPL	83 • 5	84.6	81 - 1	83.4	• 9	•
PNL	90 • 0	91.2	86.5	89.8	1 • 3	
TO NIL TO	00 6	00 0	01 -			

5 FOOT HOVER TEST

#### 1/3 OCTAVE NOISE LEVEL FREQUENCY SPECTRA

HUGHES 500 C

OCTOBER 28 1976

EVENT 94, O DEGREES, MICROPHONE 150 METERS EAST

1/3 OCTAVE BAND VS LEVEL (AVE OVER 19 SECONDS)
(DB RE 20 MICRO PA)

	ENERGY			ARITH.	STD	
BAND	AVERAGE	MAX	MIN	AVERAGE	DEV	_
21111	114 5111195		****		254	<i>90</i> °
14	62 • 7	66.9	58.4	62.2	2.0	90° (Microphone Local Relative to Hell
15	76 • 2	78.7	72.1	75 • 8	2.0	Minnighton Loca
16	65•9	67.5	63.9	65 • 7	1 • 0	/ metophone ===
17	71 • 0	72.8	68 • 1	70.9	1 • 0	Relative to Hel
18	71 • 9	73.5	70.0	71.8	•9	Melalice 10 man
19	66+3	67.8	63 • 4	66 • 1	1 - 1	•
20	74.0	75 • 8	71.8		1 • 0	
21	71 • 2	73.3	68.6		1 • 1	
22	62 • 4	63.8	60 • 4	62 • 4	-8	
23	64 • 1	66 • 4	59.7		2.0	
24	55 • 1	56.5	52.9	55.0	•9	
25	61 • 6	63 • 4	59.3	61.5	1 • 1	
26	65 • 9	69 • 1	58 • 3	65+2	2.6	
27	62 • 3	65 • 8	56.7	61.8	2.4	
28	63.0	67 - 1	56 • 6	62 • 1	3.0	•
29	62 • 7	66.8	54.5	61.5	3 • 5	
30	62 • 3	66•6	52.9		3.8	
31	61 • 4	65 • 4	51.9		3•8	
32	61 • 1	64.9	51.4		4.0	
33	58 • 6	62.9	48.6		4-4	
34	55 • 6	59.3	45.7		4.2	
35	53 • 2	57 • 4	45.0		3.7	
36	47.9	51.1	45 • 0		2.2	
37	45.5	47.9	45.0		• 7	
38	45 +0	45.0	45 • 0		-0	
39	45 • 0	45.0	45.0		•0	
40	45.0	45.0	45.0		•0	
DBA		74.4	65.2		2.8	
DBD		79.2	72.5		8.8	
OASPL		81.5	79.2		•6	
PNI.		86.2	80 - 1	83.2	2.0	

83.2

8.0

80 • 1

86.2

PNLT

83.6

## TABLE B-VII 5 FOOT HOVER TEST

#### 1/3 OCTAVE NOISE LEVEL FREQUENCY SPECTRA

HUGHES 500 C

OCTOBER 28 1976

EVENT 95. 45 DEGREES. MICROPHONE 150 METERS EAST

1/3 OCTAVE BAND VS LEVEL (AVE OVER 19 SECONDS)
(DB RE 20 MICRO PA)

BAND	ENERGY AVERAGE	MAX	MIN	ARITH .	STD DEV	
1 4	<b>60</b> c	60.0	E 4 9	80 E	o	0
14	58 • 5	60 • 2 77 • 1	56 • 7 76 • 1	58•5 76•5	•8 •2	Microphone Location Relative to Helicopter
15	76 • 5					
16	64.7	67 • 9	61 • 1	64.3	1 • 7	Mississhouse Location
17	67 • 4	69-1	65 • 1	67 • 3	•9	I threat prione Zotoman
18	71 • 5	72.8	69.7		-8	Polation to Helicanter
19	64.4	66.7	62 • 1	64.3	1.0	Literative is vicines but
20	75.8	76 • 8	74.7		+5	
21	69•0	71.0	67.3		1.0	
22	60 • 4	65.0	58 • 5		•9	
23	63.6	65 • 6	61.3		1.0	
24	55 • 7	56.7	54.0		•8	
25	64.4	66.3	62.0		1.2	
26	61.8	64.2	56•3		2.1	
27	61.5	63.7	57•0		1.7	
28	62•0	64.9	56.5		2.4	
29	62.9	66.5	57 • 7		2.3	
30	62 • 4	64.8	57.5		2•1	
31	61.9	64.1	56•9	61.5	2 • 1	
32	63 • 1	65•0	58 • 1	62.8	1.8	
33	58•9	60.6	55 • 3	58 • 6	1.9	
34	55,6	57.7	51.5	55 • 1	2.1	
35	52.9	55.0	49.3	52•6	1.8	
36	48 • 1	50.0	45.2	47 • &	1.7	
37	45 • 2	45.5	45.0		• 2	
38	45 • 0	45.0	45 • 0		•0	
39	45 • 0	45.0	45.0		+0	
40	45 • 0	45.0	45.0		•0	
DBA	71.3	73.1	67.3		1.8	
DBD	76.2	77.3	73.7		1.2	
OASPL	80 •2	81.0	75.4		• 4	
PNL	84.0	85 • ó	81 • 9		1 - 1	
PNLT	84.5	86.1	82.0		1.1	

### TABLE 8-III

5 FOOT HOVER TEST

1/3 OCTAVE NOISE LEVEL FREQUENCY SPECTRA

HUGHES 500 C

OCTOBER 28 1976

EVENT 97. 90 DEGREES. MICROPHONE 150 METERS EAST

1/3 OCTAVE BAND VS LEVEL (AVE OVER 19 SECONDS)
(DB RE 20 MICRO PA)

	ENERGY			ARITH.	STD
BAND	AVERAGE	MAX	MIN	AVERAGE	DEV
14	62.2	65 - 1	59.0	61.9	1.5
15	74•9	76.4	74.0	74+9	۰5
16	65 • 4	69.3	61 • 4	64.8	2 • 3
17	67.0	71.3	65.0	66 • 4	2 • 4
18	69.5	70 · 8	67.9	69 • 4	• 3
19	67 • 2	72.3	61.9	66 • 1	3 • 0
20	76 • 1	76.9	75.0	76 • 1	• 5
21	69•2	70.7	67.5	69 • 1	۶ •
22	64.8	69•4	61.0	64 • 4	1.8
23	66•0	69.0	62 • 7	65 • 7	1 • 6
24	61.0	65•7	56•0	60 • 3	2.4
25	<b>65</b> •6	68•3	61.5	65•2	1.9
26	63 • 3	66•5	58.6	62 • 8	2.2
27	<b>62 • 3</b>	66.7	57 • 1	61.6	2.6
28	60•9	64-4	54.0	59.9	3.2
29	61 • 4	66•3	54.0	60 • 0	3.8
30	60 • 7	65.9	<b>\$3 • 3</b>	59.3	3.7
31	59•5	64.2	52.9	58 • 4	3 • 4
35	59+8	64.6	53 • 6	58 • 9	3.0
33	5 <b>7 •</b> 0	61 • 6	50 • 8	56.1	2.9
34	53•7	59•4	48 • 1	52.6	3.0
35	52•3	57•8	47.6	51.5	2.6
36	47 • 4	51.7	45.0	47.1	1.6
37	45 • 1	46.5	45.0	45 - 1	• 4
38	45 • 0	45.0	45.0	45.0	• 0
39	45 • 0	45.0	45.0	45.0	• 0
40	45 • 0	45.0	45.0	45.0	•0
DBA	70 • 4	73 • 4	65•4	69•8	2.4
DBD	75•9	78∙5	72.8	75.6	1.6
OASPL	79•9	30·9	78.8	79.8	•6
PNL	83 • 5	85 • 6	81.2	83.3	1.2
PNLT	83.5	85 • 6	81.2	83.3	1 . 2

(Microphone Location Relative to Helicopter)

5 FOOT HOVER TEST

#### 1/3 OCTAVE NOISE LEVEL FREQUENCY SPECTRA

HUGHES 500 C

OCTOBER 28 1976

EVENT 98, 135 DEGREES, MICHOPHONE 150 METERS EAST

1/3 OCTAVE BAND VS LEVEL (AVE OVER 19 SECONDS)
(DB RE 20 MICRO PA)

	ENERGY			ARITH.	STD		
BAND	AVERAGE	MAX	MIN	AVERAGE	DEV		
14	62.3	68 • 8	56 • 1	60 • 8	3 • 5	a . =0	
15	70.9	72.4	68•9	70 • 8	• 9	315° (Microphone L Relative to He	
16	58 • 7	60.7	56.9	58 • 6	1.2		
17	57 • 1	59.6	54.8	57.0	1 - 1	Microphone L	000
18	67.2	68 • 6	63•5	67 • 1	1.2	- ( ) ( ) ( ) ( ) ( ) ( ) ( ) ( ) ( )	,
19	59.7	61.2	57 • 4	59 • 6	1.0	Relative to He	2/100
20	75.5	77•6	72.7	75•3	1.4	C. C	
21	66•6	69 • 6	64.7	66+5	1.2		
22	59•1	61.0	56•5	58•9	1.2		
23	61 • 1	65•0	57 • 8	60•7	1 • 8		
24	53.8	56 • 4	51.5	53.5	1 • 4		
25	62.9	65•6	60 • 3	62•6	1 • 4		
26	60 • 7	63 • 4	57 • <i>7</i>	60 • 5	1.5		
27	61.7	64.0	57.8	61 • 4	1.6		
28	61.5	63.7	57.9	61.2	1 • 5		
29	61.3	64.5	57•5	61 - 0	1 • 7		
30	60 • 4	63 • 1	56.9	60-1	1 • 7		
31	60 • 0	62.4	56•7	59-8	1 • 4		
32	59.5	62.2	56 • 4	59•3	1 - 4		
33	57.0	60,6	52.2	56•6	1.9		
34	53.4	57 • 1	48.2	52.8	2.2		
35	51 • 4	55•4	47.3	50 • 8	2.3		
36	47.0	50 • 1	45 • 0	46 • 7	1.6		
37	45 • 1	45 • <b>7</b>	45.0	45.1	•2		
38	45.0	45.0	45 • 0	45 • 0	•0		
39	45.0	45.0	45.0	45.0	•0		
40	45 • 0	45.0	45 • 0	45.0	•0		
DBA	69 • 6	71.7	67.0	69+5	1.3		
DBD	74.6	76.4	72.2	74.5	1 - 1		
OASPL	78.0	79.3	76.3	77.9	• 8		
PNL	82 • 3	83.9	80 • 2	82.2	1.0		
PNLT	82.3	83.9	80.2	82.2	1.0		

### TABLE B-YIL

5 FOOT HOVER TEST

#### 1/3 OCTAVE NOISE LEVEL FREQUENCY SPECTRA

HUGHES 500 C

OCTOBER 28 1976

#### EVENT 99, 180 DEGREES, MICROPHONE 150 METERS EAST

1/3 OCTAVE BAND VS LEVEL (AVE OVER 19 SECONDS)
(DB RE 20 MICRO PA)

	ENERGY			ARITH.	STD
BAND	AVERAGE	MAX	MIN	AVERAGE	DEV
					4 0
14	56 • 1	58 • 1	54 • 1	56.0	1.0
15	73 • 4	74.8	71 • 6	73.3	1.0
16	57 = 8	59+0	56.3	57.7	•6
17	55 • 6	57.9	53.0	55.5	1.0
18	<b>66.</b> 0	68 • 8	62.2	65•6	1.9
19	60 • 3	62.0	58.0	60•2	• 9
20	67 • O	68•6	65 • 5	67.0	•8
21	69•9	71.3	68•6	69+9	• 7
22	62 • 6	64•3	61 • 3	62•6	•8
23	61+6	64.3	57 • 7	61.2	1 • 8
24	55•3	57.2	51.7	55•1	1 • 5
25	61.8	64.7	58 • 4	61 • 6	1 • 6
26	62.2	64.5	57.5	61.9	1 • 7
27	63 • 2	65.0	58 • 3	62.9	1 • 8
28	63+5	66•1	58 • 1	63•i	i•9
29	63•8	66.9	58 • 5	63 • 3	5.5
30	<b>63 •</b> 3	66.0	57.7	62.8	2.2
31	61-4	64.3	56 • 7	60 • 8	2 • 3
32	60.8	65 - 1	55.3	60•0	2•7
33	59 • 1	63.6	53.0	58.2	2.9
34	55 • 4	60 • 5	48 • 6	54 • 4	3 • 1
35	52.7	57 • 6	46.9	51.8	2 • 8
36	48.2	52.6	45.0	47.6	8.5
37	45.3	47.6	45.0	45.3	• 7
38	45.0	45.0	45.0	45.0	•0
39	45.0	45.0	45.0	45.0	•0
40	45.0	45.0	45.0	45.0	•0
DBA	71.2	74.4	66.7	70.8	2.0
DBD	75.3	78.5	71+3	74.9	1.9
OASPL	77.0	78.3	75.3		•8
PNL	82.7	85.7	79.3		1 - 8
PNLT	82.7	85.7	79.3		1 • 8
	· •				

270°
(Microphone Location)
(Relative to Helicopter)

5 FOOT HOVER TEST

#### 1/3 OCTAVE NOISE LEVEL FREQUENCY SPECTRA

HUGHES 500 C

OCTOBER 28 1976

EVENT 100, 225 DEGREES, MICROPHONE 150 METERS EAST

1/3 OCTAVE BAND VS LEVEL (AVE OVER 19 SECONDS)
(DB RE 20 MICRO PA)

	STD	ARITH.			ENERGY	
	DEV	AVERAGE	MIN	MAX	AVERAGE	BAND
225° licrophone Lo elotive to He	1 • 8	57 • 4	54.7	62 - 1	57 • 8	14
<b>ત</b> ત્ર	2.0	73.5	70.6	76.3	73.9	15
1	1.2	58 • 1	55.2	59.9	58 • 3	16
iccopnone uv	1.4	56•3	54.2	59.0	56 • 5	17
olation to Ha	1 · 3 \ n	67.1	65 • 1	68•9	67 • 3	18
tioling to the	·7	62.3	61.2	63.8	62 • 4	19
	2.7	71.8	66 • 9	75.0	72.5	20
	1.0	68.0	65 • 7	69.5	68 • 1	21
	• 7	58•9	58 • 1	60 • 4	59.0	22
	1 • 7	60 - 5	58 • 3	64-4	60 • 9	23
	1 • 5	57•9	55•3	60 • 7	58 • 1	24
	1.2	64.6	62.2	66 • 8	64 • 8	25
	2.0	65.5	61.3	68 - 5	65.9	26
	1.9	66.4	63 • 1	69.9	66.8	27
	1.3	67.3	65.0	69.9	67 • 5	28
	1.5	67.7	65.1	70.8	68.0	29
	1 • 3	66.7	64.0	68 • 7	66 • 9	30
	1.2	64.8	62.0	66•7	64.9	31
	1 • 5	63 • 4	59 • <b>7</b>	65•8	63 • 6	32
	1 • 6	61 • 3	57.9	64.6	61.6	33
	1 • 7	56•4	53.2	60.5	56•7	34
	1 • 8	53 • 1	49.4	57 • 1	53 • 4	35
	1.6	48 • 3	45 • 6	51 • 9	48 • 6	36
	• 7	45.5	45.0	47 - 1	45.5	37
	•0	45 • 0	45.0	45.0	45.0	38
	•0	45.0	45.0	45.0	45 • O	39
	٠Ū	45.0	45.0	45.0	45.0	40
	1.2	74 - 1	71.6	76 • 4	74.3	DBA
	1.2	77•7	74.6	80 • 1	77 • 8	DBD
	1 - 1	78.9	76.6	80.7	79.0	OASPL
	1 - 1	85.0	82 • 1	87.3	85 • 1	PNL

87.3 82.1

85.1

85.0

5 FOOT HOVER TEST

#### 1/3 OCTAVE NOISE LEVEL FREQUENCY SPECTRA

HUGHES 500 C

OCTOBER 28 1976

EVENT 101, 270 DEGREES, MICROPHONE 150 METERS EAST

1/3 OCTAVE BAND US LEVEL (AVE OVER 19 SECONDS) (DB RE 20 MICRO PA)

	ENERGY			ARITH.	STD	
BAND	AVERAGE	MAX	MIN	AVERAGE	DEV	
						180° (Microphone Loca Relative to Hel
14	56 • 1	58 • 1	55 • 0	56.1	• 9	700
15	74.9	75.4	74.3	74.9	• 3	/00. 1 /
16	<b>57 •</b> 6	58.3	56.4	57.6	• 5	I thickobuone mone
17	56 • 0	57.6	54.7	55.9	•8	
<b>1</b> 8	66 • 3	67.6	64.7	66.2	• 7	Relative to Mel
19	62.2	63.9	60 • 6	62 • 1	•8	
20	77.0	77.8	76 • 3	77.0	- 4	
21	73.6	75 • C	71.5		•9	
22	64.8	66 • 5		64.7	1.0	
23	63.3	64.7	60.2	63 • 1	1 • 3	
24	54 • 1		52 • 1	54.0	1.0	
25	63.9	66.2	61.6	63.7	1.3	
26	65 • 5			65.2	1.6	
27	62.6	65.7			1.8	
28	62 • 5	65.7	59 • 3		1 + 8	
29	60.5	65-1	56+4		2.3	
30	59.4	64.5	55.2		2.3	
31	58 • 4	63 - 1	55 • 1		2.2	
32	58.2	62.9	54 • 1		2.5	
33	55.2	59 • 6	51.0		2.2	
34	52 • 5	57.0		51+9	2.2	
35	50 • 2	54.4	46 - 1		1.9	
36	46.2	48 • 8	45.0		1.0	
37	45.2	46.2	45.0		• 3	
38	45.0	45.0	45.0		•0	
39	45.0	45.0	45.0		•0	
40	45.0	45.0	45 • 0		•0	
DBA	69.9	73.0	67.6		1.5	
DBD	75.7	77.9	74.4		1.0	
OASPL	80 • 1	80.9	79.2		• 4	
PNL	83 • 4	85 • 3	82.3		•8	
C 111 M	00 -	25.0	20.0		- ~	

83.4

PNLT

85.3

82.3

83.3

•8

5 FOOT HOVER TEST

1/3 OCTAVE NOISE LEVEL FREQUENCY SPECTRA

HJGHES 500 C

OCTOBER 28 1976

EVENT 102, 315 DEGREES, MICROPHONE 150 DEGREES EAST

1/3 OCTAVE BAND US LEVEL (AVE OVER 19 SECONDS)
(DB RE 20 MICRO PA)

	ENERGY			ARITH.	STD	_
BAND	AVERAGE	MAX	MIN	AVERAGE	DEV	135° (Microphone Loc Relative to H
14	60 • 3	65.7	52•5	58•6	3.9	/ Maria dana / m
15	71 • 4	72.6	69•7	71.3	• 7	I MICCOPHENE LOC
16	57 • 1	62.5	53.9	56.6	1.8	halatia + H
17	55+6	59•6	53 • 6	55•4	1 • 4	/ KE/B/IVE /0 //
18	66 • 5	67 • 3	65.5	66•5	-4	`
19	60 • 3	62.3	58•6	60 • 2	•9	
20	72 • 1	75.2	69.2	71.7	1 • 7	
21	71.1	72.4	69.3	71-0	•9	
22	61.6	64.5	59.3	61.5	1 • 1	
23	58 • 5	60 • 1	55•7	58 • 4	1.2	
24	54 • 4	56 • 1	52.0	54.3	1 - 1	
25	66.0	67.5	63.9	65.9	• 9	
26	64.2	66 • 4	62 • 1	64.1	1 - 1	
27	63 • 1	64•7	59.9	63 • 1	•8	
28	64.5	66+3	59.3	64.2	1 • 6	
29	64.2	66.2	58 • 7	63.9	1 • 8	
30	62.5	64.5	57.0	62.2	1.9	
31	60.5	62.7	56 • 3	60.2	1 • 7	
32	59•5	61.4	54.0	59.2	1.9	
33	56 • 2	58•3	50.6	55•9	1 • 7	
34	53 • 2	55+3	48.2	52.9	1 • 6	
35	50 • 7	53.0	46.8	50.5	1 - 4	
36	46.2	47.9	45.0	46.1	•8	
3 <b>7</b>	45.2	46.7	45.0	45.1	+ 4	
38	45 • 0	45.0	45.0	45.0	•0	
39	45.0	45.0	45.0	45.0	•0	
40	45 • 0	45.0	45.0	45.0	•0	
DbA	71.1	72.7	67.4	71.0	1.3	
DBD	75 • 5	76.7	72.7	75.3	1.0	
OASPL	77•9	78.7	76.5	77.9	• 5	
PNL	82 • 4	83.6	8 <b>∵•</b> 2	82.3	• 9	

PNLT

82.4

83.6

80.8

•9

82.3

Helicopter Noise Level Data HUGHES 500C OCTOBER 28, 1976

		max RMS	Noise Leve	1- 18A ne sec	mPa
HELICOPTER OPERATION	RUN HUMB <i>E</i> R	OFFSET TO	PHONE	MICROP	HONE THE EAST 150M
5 ft. Hover O°	94	78.5 76.5	82.0 80.5	82.3 83.3 (90	74.3 74.0 P)
5Ft. Hover 45°	95	87.3	89.8 (5°)	<b>82.5</b> (4	<b>73.0</b> 5°)
5Ft. HOVER 90°	97	8/.3	84.0 30°)	83.0	<b>76.3</b>
5 Ft. HOVER 135°	98	86.5	<b>88.0</b> 5°)	83.8	<b>71.5</b> (5°)
5Ft HOVER 180°	99	83.3	85.3 (°)	86.0	<b>78.8</b> 70°)
5Ft HOVER 225°	100	78.3	<b>81.8</b> 5°)	<b>85.5</b>	<b>76.3</b> 25°)
5 Ft Hover 270°	,31	84.3	<b>87.3</b> 0°)	82.0	<b>73.5</b> 30°)
5Ft. H-OVER 315°	102	84.3	87.3 (5°)	83.3	<b>74.0</b> 3 <i>5</i> °)
500Ft Hover					
5 ooft HOVER					

# TABLE B-VIII Halicopter Noise Leval Data

HUGHES 500 C

OCTOBER 28, 1976

		MAX RMS Noise Level - dBA ne 20 MPa					
HELI COPTER OPERATION	RUN NUMBER		THE WEST	MICROPHONE OFFSET TO THE EAST			
OPERATION.	NOMBEA	0VER Concrete	CENTER LINE OVER Concrete	OVER GROSS	OVER nerete		
3°	56	73.3	77.5	76.5	72.0		
G LIDE SLOPE	57	77.3	84.0	82.0	74.0		
6° GLIDE	65	75.0	80.3	72.0	72.0		
SLOPE							
9°	82	75.3	80.8	78.8	743		
SLOPE	8-3	74.8	79.0	72.5	74.5		
69 MPH	58	72.5	77.0	73.8	72.3		
LEVE L FLY OVER	59	72.3	76.0	74.3	72.5		
LEVEL	60	75.5	76.5	748	74.3		
FZYOVER	61	77.3	77.3	74.5	75.8		
130 mph Level Fly over	110	77.5	79.0	77.5	77.5		

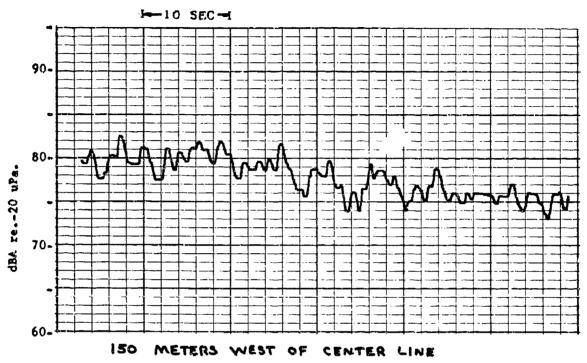
# TABLE G-VIII Helicopter Noise Level Data

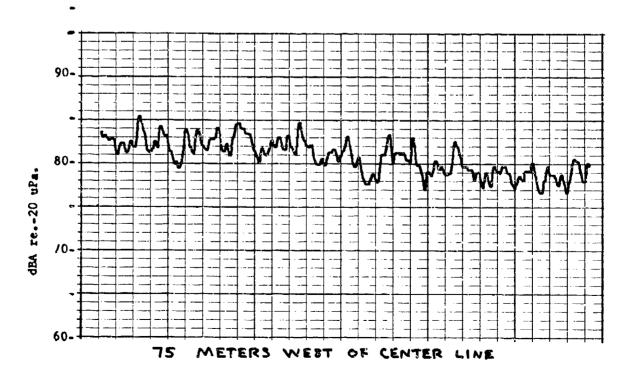
HUGHES 500C

OCTOBER 28, 1976

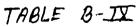
		MAX. KINS	Noise Few	el - JBA ne an	DURNE	
HELI COPTER	RUN		THE WEST	MICROPHONE OFFSET TO THE EAST		
oper ation	NUMBER	150M	CENTER LINE	CENTER LINE	OVER 150M	
		Concrete	Conurete	OVER Grass	Concrete	
LEVE L	106	81.0	79.5	79.8	80.3	
FLYOVER	107	78.8	77.3	76.5	28.5	
150 MPH	108	81.8	81.0	80.0	83.3	
LEVEL	_ •					
FLY OV ER	109	79.8	79.3	7).3	82.5	
LEVEL FLY OVER						
LEVEL FLYOUS?						
LEVEL PLYOVER						
LEVEL.					· Carrier Commission Service	

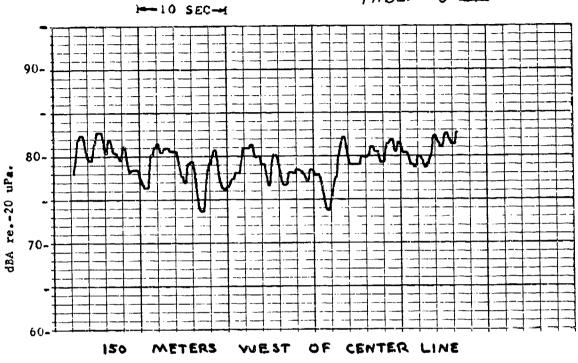


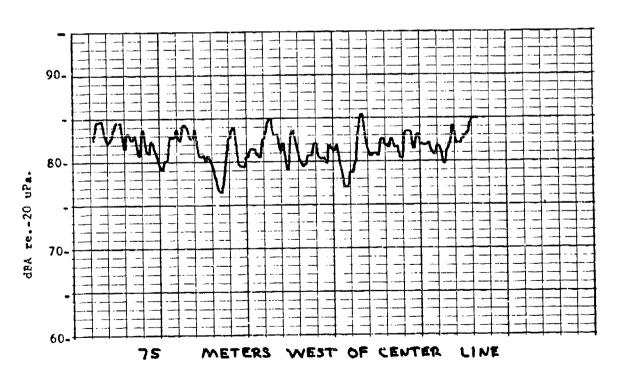




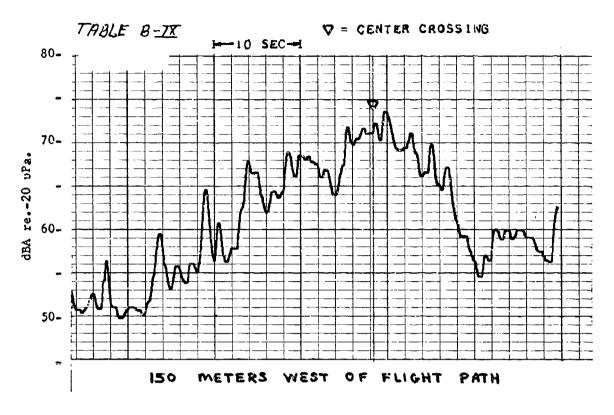
NOBE LEVEL TIME HISTORIES HUGHES SOOC HELICOPTER 90" HOVER - 5 FT.

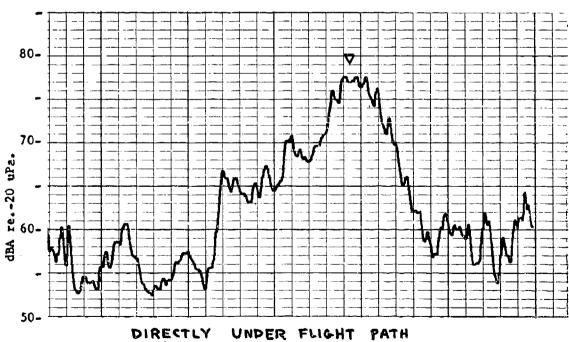




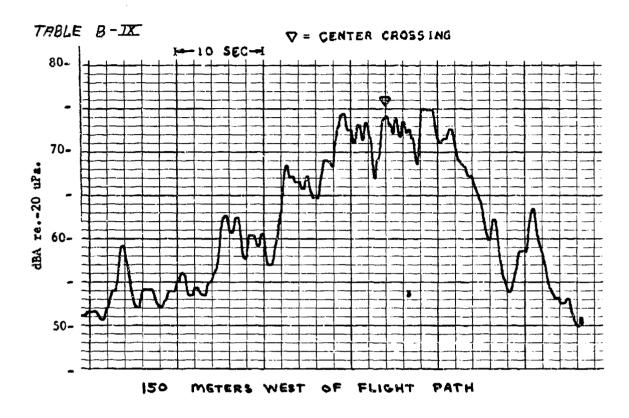


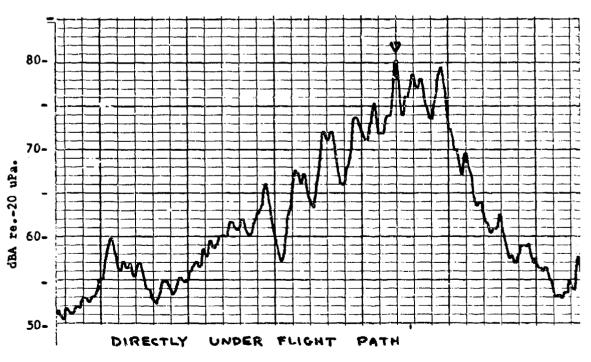
NOISE LEVEL TIME HISTORIES HUGHES 500 C HELICOPTER 180° HOVER - 5 FT.



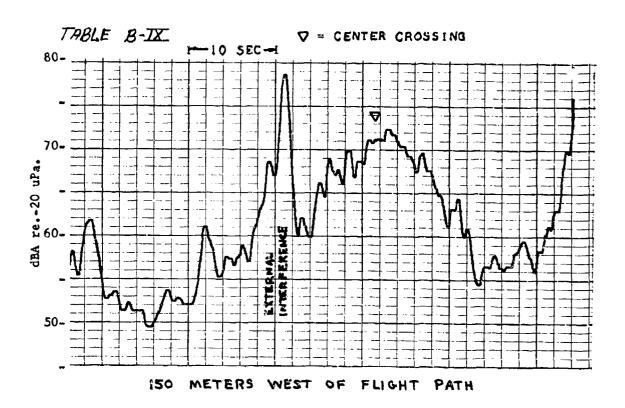


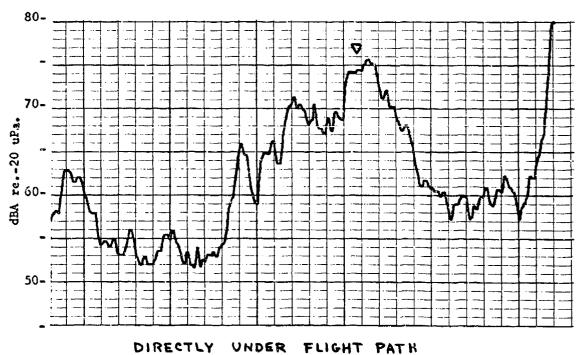
NOISE LEVEL TIME HISTORIES HUGHES 500 C HELICOPTER 3º APPROACH



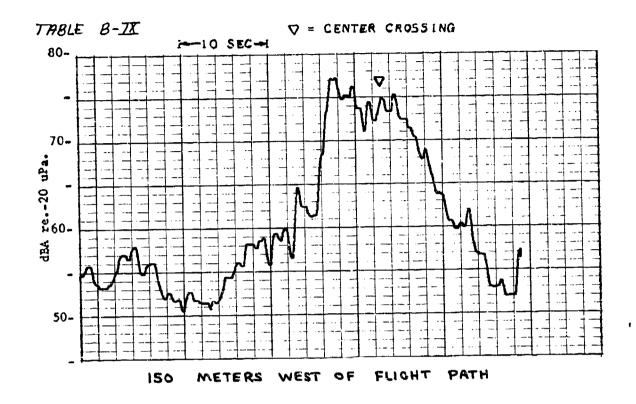


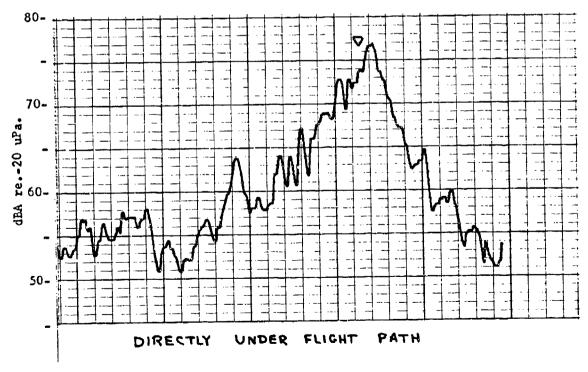
NOISE LEVEL TIME HISTORIES
HUGHES 500 C HELICOPTER
6° APPROACH



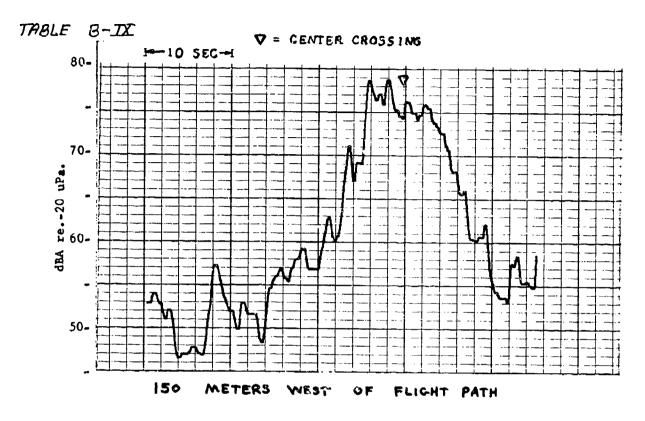


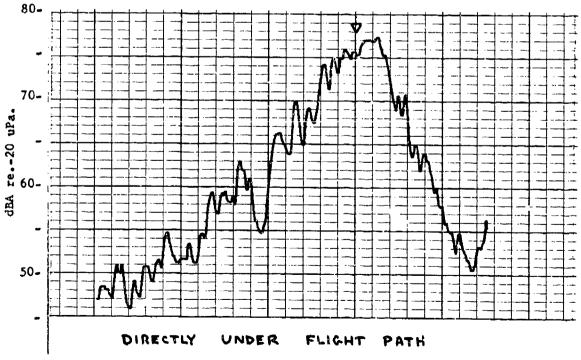
NOISE LEVEL TIME HISTORIES HUGHES 500 C HELICOPTER LEVEL FLYOVER - 69 MPH



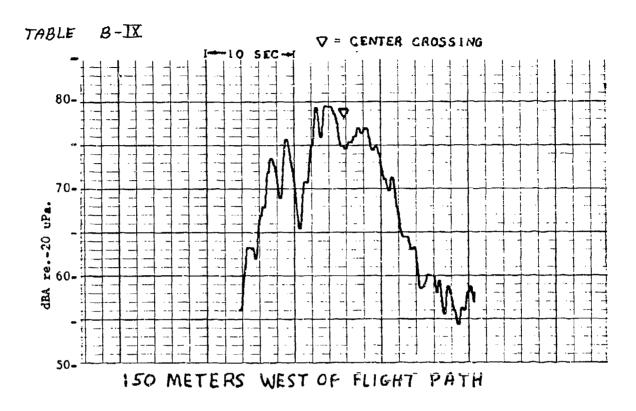


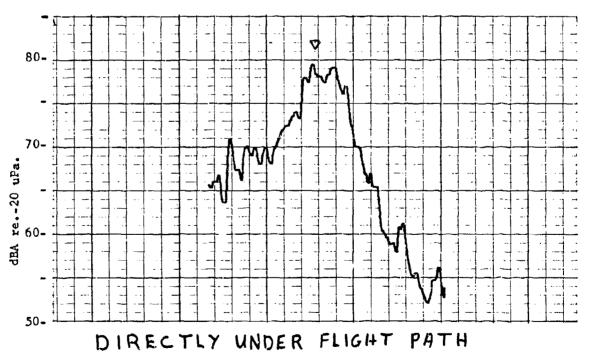
NOISE LEVEL TIME HISTORIES HUGHES 500 C HELICOPTER LEVEL FLYOVER - 110 MPH





NOISE LEVEL TIME HISTORIES HUGHES 5000 HELICOPTER LEVEL FLYOVER - 144 MPH





NOISE LEVEL TIME HISTORIES MUGHES 500-C HELICOPTER LEVEL FLYOVER - 150 MPH

# DATA TABLE C

### BELL 47G

TEST DATE:	10-5-76 TEST SITE: DULLE	S AIRPORT
SECTION - C	CONTENT	PAGE #
I	RUN LIST	208
II	GROUND AND FLIGHT LOG DATA	211
III	METEOROLOGICAL DATA	213
IV	LEVEL FLYOVER AND APPROACH NOISE DATA	214
v	TIME HISTORIES	216
vī	1/3-OCTAVE BAND SPECTRAFLYOVER AND APPROACH	239
VII	1/3-OCTAVE BAND SPECTRA5 FOOT HOVER	262
VIII	MAXIMUM dBA NOISE LEVEL (ALL RUNS)	283
īx	SELECTED dBA TIME HISTORIESGRAPHIC PLOTS	286

THE NOISE LEVELS PRESENTED IN SECTIONS IV, V AND VI

HAVE BEEN TABULATED FOR THE SELECTED RUNS AND MICROPHONE

LOCATIONS INDICATED ON THE FOLLOWING PAGE.

TABLE C-I
LIST OF RUNS SELECTED FOR ANALYSIS

			1	MICROPHONE	LOCATION	
			WES	T	EAS	T
RUN#	TEST CONDITION	N	150 m SIDELINE	CENTER LINE	CENTER LINE	150m SIDELINE
19	6° Approach	60 mph	x		x	х
26	Level Flyover	60 mph	х		х	x
28		68 mph			х	
29		1		}	х	
30		75 mph	x		х	х
31			x		x	х
33		1	x		х	х
36	₩.	80 mph	x	1	х	x
41	9° Approach	60 mph	x		х	х
	Microphone Loca	ations	Over Transpo Site Surface	Over Plywood	Over Transpo Site Surface	Over Transi
			209			

#### GENERAL COMMENTS

- o No data was taken for the 3° approach condition.
- o The weather conditions were excellent with almost no wind.

	Date: Oct. 5,1976		Comments	Abort (Amends Tabe-off)						Abort (Aircraft lake-off)		Abart	Abort (Airent Take of Art Abort (Airent Take off)	96
<b>₹</b> 9	Test	(10 51)	Wind Director											
Log Data		~	Speed				·			<del></del>				
		Ground Westher	ВН											
F1/19		Groun	Temp										_	42
Ground and Flight			097	50°F									56°F	inciden
Grouns	ن ج		RPM											(DE/19
	Number:	2	Altitude over Mies.	554.						<del></del>	£ →	£; →	500 49.	-> to
[-II	otton	Conditions	Me or	, 5g						<b>→</b>	25.	`2>	exerter)	Lecetton. Microphole at grazing incidence
TABLE	Registration		R/1	0 -						<del></del>	o>	1 1 1	^	
7A8	ų.	Actual	sļθ	0 -						<del>-</del>		3 3 3 0 0	Series in	
			Reading	12 0 0	25 th	15° 58'	13 20 9 30 9 30 9	12 \$ %	14 006	/35 /35°	\$ 10 13 8 20 8 20 8 20 8 20 8 20 8 20 8 20 8 20	100>	m11 #	to at
	9-64		# 8P	1 %	66	<b>2</b>	56	£ 6.	? ? }	97.5	833	8861	5113 #i3	76.5 Serth
	Bel)	542	Altitude	#s						>	\$ →	\$	500 ti	→ %
		Conditions	Velocity	0 -						<b>→</b>	<b>⋄</b> →	10 mg	(Mistake	) betand
	Helicopter Model:	Taract	$\tau_{ype}$	Hover						<b></b> >	¥ ° ° ° ° ° ° ° ° ° ° ° ° ° ° ° ° ° ° °	, 9 ————————————————————————————————————	Ren 25	→ <b>₹</b>
	elicopi		T.me	8:25 9:33	6.66	8 8 3	36.35	33.37	8:38:5 38:56	9 × × × × × × × × × × × × × × × × × × ×	8:56 8:57 8:57	20.9 20.9 40.9 81.9	6	Semd Level /
	ヸ		۶	~ 0	10 A	ري ري	<b>&gt; 00 (</b>	٠ 9 :	5 th 5	© ±	500	50 0 0 0 13	व र र	8 B

Data
\$
Flight
pue
C-round
C-11
TABLE

Oste: Oct. 5, 1976		Lomments	Abort way and at run	Abort Applies intersprense	A bort Recet A boort	Slightly Majs coming throngs in incoming the cut.	
test	(10 61)	Wind Direction					
	- [	Wind					
	West	RH		<del></del>			
	Ground Weather	Temp					 
		OM.					
23983		RPn.					 
	Sagi	Attitude Aist	£-0 tf.			\$ →	
Se.	Conditions	Me or f		* * * *>	<i>z</i> → →	5, ", ",	
Registration Number:		8/p /	000	000000	00000	111	
Regi	Actus	#K	<del>"</del>	86   288 4	\$	55 mm	
		Heading	121012	10121012 1 10	12 1012 1012	100>	
		488	79 29	2 R   28   8	2 1 1 25 %	8 8 8	 
9-64		Altitude	# &			° ° 3 →	
8e//	Conditions	Velocity !	49 mb y	2	·\$	60 mph	
Helicopter Model: Bell 49-6	Target (	يالمحد	Leve Fry over			. 40 b.	
copter		77.1800	9. 9. 9. 9. 9. 9. 9. 9. 9. 9. 9. 9.	9:35	24 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6	9:5% 9:59 00:01	
Heli		Run	25.82	9-16-16-16	20 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6	= \$ 3	 -

فقعه الأشفاذ بجديم يعاطين كالالا لأسطيه لاتباء سيطينين جديسه

TABLE C-III.

# METEOROLOGICAL DATA DULLES INTERNATIONAL AIRPORT OGTOBER 5, 1976

TIME (Hours)	TEMP (°F)	BAR. PRESS. (mmHg)	REL. HUM. (%)	WIND SPEED (mph)	WIND DIRECTION (Degrees)	REMARKS
0815	53	764	86	3-4	10	Sky-Clear
0830	54		86	2-3	20	
0845	55		84	2-4	340	
0900	56		84	5-6	350	
0915	57	764	83	4-6	5	
0930	59		80	4-5	0	
0945	59		79	34	25	
1000	60		80	3-4	5	
1015	60		78	2	10	

TABLE C-IV

#### HELICOPTER APPROACH AND FLYOVER NOISE DATA

BELL 47 G

OCTOBER 5, 1976

#### MICROPHONE OFFSET 150 METERS WEST (LEVELS-DB RE 20 MICRO PA)

EVENT	EPNL	DBA(M)	DBD(M)	OASPL	PNL(M)	PNLT(M)	LEQ	DUR(A)	DUR(P)	TÇ
19	89.3	76.2	81-1	83.2	88 • 4	88 • 4	72.5	27.5	33.5	•0
26	88.6	75•0	80 • 1	81.5	87.3	88 • 2		50.0	38.5	1.3
30	87.3	74.2	79.7	80.3	87 • 1	87.1		41.0	40 • 5	•0
31	89.7	76.3	81.8	81.8	88 • 6	89.6	72.4	28.0	28.0	1.4
33	90.7	76.8	82.8	82.5	89.6	90 • 4	73.5			1.2
36	90 - 1	76 • 4	82.0	81 • 9	89.5	89 • 6	71.9			1.2
41	87 • 4	72.5	77 • 1	79.2	84.6	85 • 2	68 • 5			1 • 4

#### MICROPHONE OFFSET 150 METERS EAST (LEVELS-DB RE 20 MICRO PA)

EVENT	EPNL	DBA(M)	DBD(W)	OASPL	PNL(M)	PNLT(M)	LEQ	DUR(A)	DUR(P)	TC
19	86 • 8	73.3	88.9	79.2	86•4	86•4	69.3	27.0	34.5	•0
26	87.6	73.5	89.6	79 - 1	87.0	87.0	69.7	32.0	28.5	•0
30	86.9	73.6	79.5	79.2	86.7	86 • 7	69 - 1	32.5	32.5	•0
31	89.3	74.9	80•1	80.8	87-1	88 • 1	71.7	32.0	31.5	1.1
33	90 • 6	77.0	82 • 4	82.0	89 • 6	89.6	73.3	28 • 5	29.5	•0
36	89.6	75.9	81.2	81.5	88.2	88.2	72.6	30.5	31.0	• 0
41	87 • 4	74 - 1	79.6	80.8	86•8	87•6	69•1	32.5	33.0	1.0

TABLE C-IV

#### HELICOPTER APPROACH AND FLYOVER NOISE DATA

BELL 47 G

OCTOBER 5, 1976

# CENTERLINE MICROPHONE ( SOFT SITE ) (LEVELS-DB RE 20 MICRO PA)

EVENT	EPNL	DBA(M)	DBD(M)	OASPL	PNL(M)	PNLT(M)	LEQ	DURCA	DUR(P)	TC
19	91.0	78.5	84 • 3	86•3	91 • 6	91.6	75.2	19.0	18.5	•0
26	89.6	76.3	83.3	83.6	89.9	90.5	73.2	21.5	80.0	1.2
28	90 • 7	78.5	84.8	84.2	92 • 1	92.1	75.2	17.5	15.5	•0
29	91.6	78•5	84.9	84.4	91.9	91.9	74.8	25.5	22.5	• 0
30	89.2	75.9	82 • 4	82.9	89.3	90 • 7	70.5	36.0	21.0	1.9
31	91.3	77.7	83.5	83.3	90.7	91.9	74.0	25.0	25.5	1.5
33	91.6	78•9	84 • 8	84.2	92.0	92.0	75.9	19.5	19.5	• 0
36	90 • 7	77 • 8	84.0	83.5	91.2	91+2	74.5	53.0	22.0	• 0
41	88.5	78.5	84.3	85 • 4	90 • 8	90.8	73.7	13.5	13.5	•0

#### NOISE LEVEL TIME HISTORY DATA

BELL 47 G

OCTOBER 5, 1976

#### EVENT 19, 6 DEGREE APPROACH, MIC. 150 METERS WEST

INT	DBA	DBD	UASPL	PNL	PNLT	PNL-DBA	DBD-DBA
1	63•B	67•9	<b>7</b> 0•5	75•4	76•6	11.6	4 • 1
3	64•3	68•5	70•9	76 • 4	76 • 4	12.1	4.2
5	63•8	67•7	70 • 3	75•6	75•6	11.8	3•9
7	65•0	68+8	70•9	76 • 4	76 • 4	11.4	3 • 8
9	69•0	72 • 4	74.0	80 • 1	81.5	11-1	3 • 4
11	71 • 3	74.6	75 • 0	81.5	81•5	10.2	3 • 3
13	72.9	76.0	75•9	82.8	84.2	9.9	3 • 1
15	71 • 6	75.0	74.5	81.7	83.2	10.1	3.4
17	73•6	77-3	76 · 3	83 - 1	85+2	9.5	3.7
19	71.5	75•6	75•5	82•2	84.2	10.7	4 • 1
21	70•7	74.8	75 • 2	82 • 4	82 • 4	11.7	4 - 1
23	74.2	78.2	76.9	84.2	85•4	10.0	4.0
25	73.0	76 • 8	77.0	83.7	85.2	10.7	3.8
27	71.9	76•3	76.9	83.2	84.3	11.3	4.4
29	72.5	77 • 1	77.9	83•9	83•9	11.4	4.6
31	71.8	76 - 1	77.9	83.7	83.7	11.9	4.3
33	73.6	<b>7</b> 8•5	80.0	85.9	85.9	12.3	4.9
35	76•0	80.7	82.5	88.0	88.0	12.0	4.7
36	76.2	80.7	83 • 0	88 • 4	88•4	12.2	4.5
on <del>&gt;</del> 38	76.2	81 • 1	83.2	88.3	88•3	12.1	4.9
40	75.0	80 • 2	82 + 4	87.4	87:4	12.4	5.2
42	74.6	79•9	82.0	86.6	86•6	12.0	5•3
44	74.3	<b>79.</b> 5	81.5	86.1	86 • 1	11.8	5.2
46	73 • 6	78 • 7	80.5	85•7	87.2	12.1	5 • 1
48	71 • 0	76 • 2	77•9	83•3	84.5	12.3	5.2
50	69.9	74.8	76.0	82.2	82.2	12.3	4.9
52	69.2	73 • 8	74.8	81.3	81 • 3	12.1	4.6
54	68 • 8	74 • 0	75 • 4	81.2	81.2	12.4	5.2
56	68•2	73 • 3	74.8	79.8	79•8	11.6	5 • 1
58	67.6	72.7	74.8	79 • 4	81.0	11.8	5 • 1
60	66 • 7	72 • 1	74.6	79 • 1	79 - 1	12.4	5 • 4
62	65 • 4	71.5	74.2	78 • 1	78 - 1	12.7	6 • 1
64	64.7	71.0	73.8	77.5	79•3	12.8	6•3
66	63.2	70 • 3	73.4	76.7	77.8	13.5	7 • 1
68	63 • 6	70•2	73 • 4	76.7	78 • 1	13.1	6 • 6
70	64.4	71.0	74.0	77.6	78.8	13.2	6.6
72	64 • 1	70.9	73 • 8	77.5	77.5	13.4	6.8
74	62.9	69,8	72.9	76.5	78 • 1	13.6	6.9
76	61.5	68•9	72.5	75.3	76.5	13.8	7.4
7ช	<b>६०∙</b> ८	68 • 1	71 • 8	74.5	74.5	13.7	7•3
80	60.7	67.8	71.6	74.0	74.0	13.3	7 • 1

# TABLE C-I

#### NOISE LEVEL TIME HISTORY DATA

BELL 47 G

OCTOBER 5. 1976

EVENT 26. 60 MPH FLY BY. MIC. 150 METERS WEST

INT	DBA	DBD	UASPL	PNL	PNLT	PNL-DBA	DBD-DBA
5	59•8	65 • 4	71.0	73.1	73 • 1	13.3	5 • 6
7	64-8	69.0	71.9	76.8	78.6	12.0	4.2
9	66.7	70.9	72.2	78 • 7	80.7	12.0	4.2
11	66 • 8	71 • 1	72.9	79.0	80.5	12.2	4.3
13	68.2	72 • 4	73.6	80.0	80.0	11.8	4.2
15	69.5	73.7	75.0	80.8	82.1	11.3	4.2
17	69.3	73.7	75 • 4	80.7	82.1	11.4	4 • 4
19	70.0	74.9	76.4	82.0	82.0	12.0	4.9
21	70.9	76.0	77.8	83.7	83.7	12.8	5.1
. 23	71.6	77.0	79.1	85.0	85.0	13.4	5 • 4
25	73.0	78 - 1	80.0	85.7	85.7	12.7	5 • 1
o# →27	74.4	79.4	80.9	86.8	86.8	12.4	5.0
29	75.0	80 - 1	81.5	87.3	87.3	12.3	5 • 1
31	74.4	79.7	81.1	86•6	86.6	12.2	5 • 3
33	74.5	80.0	81.0	86.9		12.4	5 • 5
35	73.6	78.8	80.2	86.2	86.2	12.6	5+2
37	73.0	78 • 1	79.2	85.5	86.5	12.5	5 • 1
39	71 + 1	76.4	77.6	83.8	83.8	12.7	5 • 3
41	69.3	74.7	75.8	81.7	83.0	12.4	5 • 4
43	69.3	74.1	75.3	81 • 1	82.6	11.8	4.8
45	71.4	75.8	75.8	82.8	82.8	11.4	4+4
47	71.0	75.2	75.0	82.4	83.8	11.4	4.2
49	70.2	74.0	74.6	81.0	82.9	10.8	3.8
51	69.0	73.7	73.2	80.9	80.9	11.9	4.7
<b>5</b> 3	67.9	73.1	72.6	80 • 4	81.5	12.5	5.2
<b>5</b> 5	68•3	72.5	73.6	80.0	81.1	11.7	4.2
57	66.9	71.2	72 • 7	78.6	<b>79 •</b> 7	11.7	4.3
<b>5</b> 9	66.5	71.4	72.0	78 • 7	79 • 8	12.2	4.9
61	65 • 8	70.5	72.0	77 • 1	78 • 4	11.3	4.7
63	64.8	69.6	72.0	75+9	77•8	11.1	4 • 8
65	63.5	68 • 8	71 • 7	75.2	76 • 9	11.7	5 • 3
67	64.6	69.5	72•3	76.2	77.3	11.6	4.9
69	66 • 1	70•9	73.2	77 • 1	78 • 2	11.0	4•8
71	65•8	71.3	72•8	77•7	79 • 2	11.9	5•5
73	63 • 3	69 • 8	72.2	76.0	77•7	12.7	6 • 5
<b>7</b> 5	61-4	68.7	71.8	75 • 1	76 • 1	13.7	7 • 3
77	62 • 9	69•6	72 • 6	76 • 1	76•6	13.2	6 • 7
79	67.0	72.3	74.6	<b>7</b> 8•6	79 • 1	11.6	5+3
81	68•0	73 • 4	<b>7</b> 5•5	79•3	80•4	11.3	5 • 4
83	66 • 7	72.1	74 • 6	78.0	78 • 6	11.3	5 • 4
85	68 • 6	69 • 1	72.2	75•6	76 • 1	13.0	6.5
87	58 • 4	66•6	70•8	73 • 1	73 • 1	14.7	8 • 2
95	57.5	66.8	70 • 5	72.4	72.4	14.9	8•7

# TABLE C-II

### NOISE LEVEL TIME HISTORY DATA

BELL 47 G

OCTOBER 5, 1976

EVENT 30. 75 MPH FLY BY. MIC. 150 METERS WEST

INT	DBA	DBD	UASPL	PNL	PNLT	PNL-DBA	DBD-DBA
5	63+1	67•3	70 • 1	74.5	74.5	11.4	4.2
7	64.7	68 • 3	71.0	75 - 6	77.1	10.9	3 • 6
9	64.6	69 - 1	71 • 6	76 • 0	77 • 6	11.4	4 • 5
11	65.0	69.5	71 • 7	76.5	76.5	11.5	4 • 5
13	65 • 2	69.2	71.2	76 • 4	77.6	11.2	4.0
15	67.3	71.3	72 • 6	78 • 3	89.0	11.0	4.0
17	69•1	73.4		80 • 4	80 • 4	11.3	4.3
19	7 i • 3	75∙8 76∙6	76 • 4	83.0	83-0	11.7	4.5
21	71.7	76 • 6	77.4	83.7	83.7	12.0	4.9
23	72.6	78 • 1	78 • 8	84•7 84•6	84.7	12.1	5•5
oh <del>&gt;</del> 25	72 • 3	77 • 8	79•0	84.6	84.6	12.3	5•5
27	72•6	78•2	79 • 4	85.2	85•2	12.6	5 • 6
29	72•6	78 • 1	79•9	85 • 6 87 • 1	85•6 87•1	13.0	5 • 5
31	74.2	79.7	80 • 3				5•5
33	73 • 1	78•3	79 • 1	80.0	86+0		5•2
35	71.7	76 • 8	77 • 4	34.4	84.4	12.7	5 - 1
37	71 • 7	76•4	76•5	84•4 83•4	83.4	11.7	4-7
39	70 - 1	74 • 4	75•2	81.8	83.5	11.7	4.3
41	68•8	72.8	73•8			11.5	4.0
43	70 - 2	74 - 3	74.5	81 - 7	82.7	11.5	4.1
45	69 • 7	73.9	74.8	81 • 3 80 • 3		11.6	4.2
47	69 • 1	73.5	74.3	80 • 3 77 • 5 76 • 4	81.6	11.2	4 • 4
49	66•3	70 • 9	72.6	77 • 5	78 • 8	11.2	4 • 6
51	64 • 4	69 • 7		76 • 4	76 • 4	12.0	5•3
53	64.3	70.3	73 • 4	77 - 1		12.8	6.0
<b>55</b>	63 • 8	70 • 2	73 • 3	76 • 7		12.9	6 • 4
57 53	63.5	68.9		75.2		11.7	5+4
59	65.0	69 • 5	70.9	76.0	76.0	11.0	4.5
61	63 • 4	68 • 6	70 • 3	75 • 2 73 • 6	76.6	11.8	5 • 2
63	62 • 1	67-1	69.7	73.6	74.7	11.5	5.0
65 67	63 • 1	66 • 9	69•6	73•5 74•5	74.7	10.4	3 • 8
67 69	64.0	68•0	70 • 4 70 • 8	74•5 75•6	76•0 77•2	10.5	4 • 0 4 • 0
71	65•1 65•6	69.1	70 • 8 71 • 5	76.2		10.5	
73	63.5	70 • 0 69 • 5	71.5	76.3		10•6 12•8	4•4 6•0
75 75	61.5	68.9	71.8	75 • 5	76.6	14.0	7•4
73 77	61.4	68 • 8	71 • 8	75.2		13.8	7•4
77 79	61.3	68.7		74•4	74.9		1•4 7•4
81	62.6	69.5	72.2	74.9	74.9	12.3	6.9
83	65 • 6	71 • 4	73 • 3	78 • 1			5.8
85	67.5	72.4	73 • 8	<b>79 •</b> 3	79.3	11.8	3•0 4•9
8 <b>7</b>	65.3	70.2	71.9	76.6	77.1	11.3	4.9
89	60•6	66.7	69•3	72.8	73.3	12.2	6.1
	00-0	00+1	07.0	15.40	13.3	1616	0 • 1

# TABLE C-JZ

#### NOISE LEVEL TIME HISTORY DATA

BELL 47 G

OCTOBER 5, 1976

#### EVENT 31, 75 MPH FLY BY, MIC . 150 METERS WEST

INT	DB4	DBD	OACDI	PNL	PNLT	PNL-DBA	DBD-DBA
	62.7	67.7	72 - 1	74.7	76 • 1	12.0	5.0
3	63.9	68•6	72.5	75•2	75•2	11.3	
5	61.8	67 • 2 70 • 7	73.2	73.7	73.7	11.9	5 • 4
7	65•5	70.7	74-6	77-3	78 + 5	11.8	5 - 2
9	68•0	12.5	75.2	79•3	81.2	11.3	4.5
11	67•5	70.7 72.5 72.1 73.7 74.0 75.3 76.5 78.2 79.5	75.3	79.0	79 • 0	11.5 11.7 11.6 11.4 12.0 12.4 12.9 13.1 13.2 13.2 12.7 12.3 12.4 11.9 11.5 11.1 11.4 11.7 11.2 11.1	4.6
13	69.4	73.7	76 • 4	81 • 1	81 • 1	11.7	4.3
15	69•7	74.0	76.9	81.3	82.3	11.6	4.3
17	71.0	75•3	77 • 5	82 • 4	83.9	11.4	4.3
19	71.8	76.5	78 - 1	83.8	85.2	12.0	4.7
21	73.1	78•2	78.9	85•5	85.5	12.4	5 • 1
23	73.9	79.5	79 <b>.</b> 8	86 • 8	86.8	12.9	5 • 6
$OH \xrightarrow{25} 26$	74.0	79.6	79.9	87-1	87.1	13-1	5 • 6
27	<b>75•</b> 0	80.8	81.0	88.2	88.2	13.2	5 • 8
29	75 • 1	80.8	80.8	88.3	88.3	13.2	5•7
31	75.8	81.3	81.2	88.5	88 • 5	12.7	5 • 5
33	76.3	81.8	81.8	88•6	88 • 6	12.3	5.5
34	75.9	81.3	81.3	88.3	89 • 6	12.4	5 • 4
36	74.6	79.6	79.8	86.7	88.0	12.1	5.0
38	73.3	78 • 1	78.2	85 • 6	85 • 6	12.3	4.8
40	73.5	78 • 4	78•0	85.9	85.9	12.4	4.9
42	73 • 4	78.2	77 • 8	85.3	86 • 4	11.9	4.8
44	71.9	76.3	76•7	83.4	83.4	11.5	4.4
46	72.5	76.8	76.7	83.6	85 • 4	11.1	4.3
48	71.8	76 • 1	76•6	83.2	84.4	11.4	4.3
50	70 • 5	75 • 1	76 - 1	82.2	82.2	11.7	4.6
52	67.9	72.2	73.9	79 • 1	81.0	11.2	4 • 3
54	67.5	72.4	73∙8	78•6	80•6	11-1	4.9
56	66•6	71.8	73•7	78 • 1	79•7	11.5	5•2
58	69•3	73.2	74.7	80.0	82.0	10.7	3.9
00	09.0	1341	1211	80.3	81.9	11.0	Zi • Zi
62	66•0	71.5	73.8	77.9	79 • 1	11.9	5, 6,
64	64•0	69•6	72•4	75.8	77.4	11.8	5.6
	62•0	67 • 4	70•7	74.1	75 • 4	12.1	5 • 4
68	51.8	67.8	70.7	74.2	75.9	12.4	6•0

# TABLE C-I

#### NOISE LEVEL TIME HISTORY DATA

#### BELL 47 G

OCTOBER 5, 1976

#### EVENT 33, 75 MPH FLY BY, MIC. 150 METERS WEST

	INT	DBA	DBD	OASPL	PNL	PNLT	PNL-DBA	DBD-DBA
	1	65.5	70 • 5	74.7	77.5	78.7	12.0	5.0
	3	65.4	71.2	75.8		77.8	12.4	
	5	67.0	72 • 5	76.5		79.0	12.0	5.5
	7	67.2	72 • 4			80 - 1		
	9	67.5	72 • 5			80.3		
	11	69.2	73 • 8	77.9	81.0	82.1		4.6
	13	70.0	74.8	78.5		83.4		
	15	72.6	77 • 2	79.3	84.3	84.3		4.6
	17	73.3	78.0	79.4	85 • 4	85.4	12-1	
	19	72.8	77 • 9	79.3			12.7	
	21	73.8	78•9	80 • 3	86 • 5	87.5		
OH	23 av	75.7	80 • 8	81 • 4	88.3	88.3		
OH,	25	76.3	81.5	81.7		89.1		
	27	75.7	81 - 6			89.2		5.9
	29	76.6	<b>82 • 4</b>	82 • 1	89.6			
	31	76.8	82 • 8	82.4				
	33		82 • 3		89.2	90 • 4	12.5	5 • 6
	35	76.5	81 • 6	81.7	88 • 4	89.4	11.9	5 • 1
	37	75 • 1	79 • 8		86.9	86.9	11.8	4.7
	39	74.2	78 • 8	78 • 8	86 • 1	86 • 1		4.6
	41	74.8	78•9	78 • 4	85•8	87.4	11.0	4 • 1
	43	72 <b>.7</b>	77.0	77.2	84.3	84.3	11.6	4 + 3
	45	72.0	76 • 3	76.9	83.7	84.8	11.7	4.3
	47	72.7	77•3	77.8	84.6	86 • 1		4.6
	49	73.8	78 • 4	77.9	85.2	85.2		
	5 <b>1</b>	71.3	76.0	76.8	82.8	82.8	11.5	4.7
	53	68.9	73 • 4	75.•6	80.7	82.2	11.8	4.5
	55	68•9	73 • 6	75 ⋅ €		81.7	11.7	4.7
	57	71.2	74.9	76 • 1	82.1	84.0	10.9	3 • 7
	59	70 • 4		75 • 6			10.9	3.9
	61		70 • 7		77.2			
	63	53 • 7	69•3	72.4		77.6	12.3	5•6
	65	61 - 1	68•0	72.0	74.4	75•7	13.3	
	67	61-1	68 • 4	72.2	74.3	76.0	13.2	7 • 3

# TABLE C-II

#### NOISE LEVEL TIME HISTORY DATA

BELL 47 G

OCTOBER 5, 1976

EVENT 36, 82 MPH FLY BY, MIC. 150 METERS WEST

INT	DBA	DBD	OASPL	PNL	PNLT	PNL-DBA	DBD-DBA
1	60.5	66.5	73.3	72.8	73.9	12.3	6.0
3	61 • 4	67.5	73.7	73.9	74.9	12.5	6.1
5	65•0	70.0	74-1	76.5	76.5	11.5	5.0
7	67 • 4	72.0	74.8	78 • 7	80 - 1	11-3	4.6
9	67.0	71.7	75.2	78•7	79.9	11 - 7	4.7
11	69.4	73.6	76.2	80.5	81.8	11-1	4.2
13	69.2	73.6	76.5	80 - 1	81 • 4	10.9	4 • 4
15	71.8	76.4	78.3	83.2	83•2	11-4	4.6
17	72 - 5	77 • 4	79.0	84.7	84•7	12.2	4.9
19	72.9	78.4	79.0	85.5	85.5	12.6	5.5
21	74.0	79.4	80.0	86 • 6	87.6	12.6	5 • 4
o# <del>&gt;</del> 23	74.9	80•9	81.2	88.1	88 • 1	13.2	6.0
25	75.4	81.3	81.2	88.5	88.5	13.1	5•9
27	76.3	82.0	81.9	89.5	89.5	13.2	5.7
29	76.0	81.8	81.7	88.7	88•7	12.7	5.8
31	76 • 4	81.6	81.3	88 • 4	89.6	12.0	5.2
33	75.3	80.2	80.0	87.5	88.8	12.2	4.9
35	73.8	79.0	79•2	86.2	87•3	12.4	5•2
37	74.2	79.2	78 • 4	86 • 1	86.1	11.9	5•0
39	73 • 4	78 - 1	77.3	85.5	85•5	12.1	4.7
41	72.5	77.2	76-7	84.2	85+3	11.4	4 • 4
43	72.3	77.0	76•6	83.6		11-3	4.7
45	72.3	76 • 8	76.5	83-1	84.4	10.8	4.5
47	71.0	75 • 6	75•5	81.9	83.7	10.9	4 • 6
49	69•7	74.5	74.3	81 • 3	82.5	11.6	4 • 8
51	68 • 7	73.2	73•9	80.3	81.3	11.6	4.5
53	67 • 4	71.8	73.2	78•5	79.9	11-1	4 • 4
55	65•8	70•9	73 • 1	77.3	79.3	11.5	5 • 1
57	64 • 4	69.8	72.3	76 • 3	77•7		5 • 4
59	68 • 3	72.5	73•7	79.0	80.4	10.7	4.2
61	69•6	73.3	74 • 1	79.8	81.6	10.2	3•7
63	66+4	71 - 4	73.5	77 • 7	79•3	11.3	5•0
65	64.5	70 • 1	72.7	76 • 6	<b>78 • 5</b>	12.1	5•6
67	61 • 6	68 • 7	72.2	75.3	75.3	13.7	7 • 1
69	66 • 4	70.7	73 • 3	77.4	79 • 1	11.0	4 • 3
71	71.3	74.3	75•0	81 • 7	83 • 5	10-4	3 • 0
73	70 • 7	73.6	74.8	80 • 7	81.9	10.0	2.9
75	70.2	73.6	74 • 4	80-0	80.0	9•8	3 • 4
77	67.2	70.9	72.0	77 • 4	77 • 4	10.2	3 • 7
79	57 • 1	63 • 7	68.0	70.5	70.5	13.4	6•6
81	57•7	63 • 7	68 • 1	70•5	71 - 7	12.8	6.0

#### NOISE LEVEL TIME HISTORY DATA

BELL 47 G

OCTOBER 5. 1976

EVENT 41. 9 DEGREE APPROACH. MIC. 150 METERS WEST

INT	DBA	DBD	OASPL	PNL	PNLT	PNL-DBA	DBD-DBA
1	63.2	68 • 4	69.9	74.7	75.2	11+5	5•2
3	68•6	72.8	74.4	79.7	80 • 4	11.1	4.2
5	71.3	74.5	75•3	82.1	83.5	10.8	3.2
7	70•3	73.4	74•5	80.8	82.5	10.5	3 • 1
9	70 - 1	73.9	74.9	81 • 3	82.2	11.2	3∙8
11	71 • 1	74.7	75•8	82.3	83.3	11.2	3 • 6
13	66 • 8	72.0	73•9	79.4	80.9	12.6	5.2
15	63.0	68•6	71.7	76 • 2	78 • 0	13.2	5 • 6
17	59 • 6	66 • 3	70 • 3	73.2	74.6	13.6	6.7
19	59•3	65•6	69 • 4	72.7	73.5	13-4	6.3
21	61 +4	66 <b>• 6</b>	69 • 1	74.7	75 • 6	13.3	5.2
23	63.3	68•0	69.8	75 • 7	76•7	12.4	4.7
25	61 • 9	66•7	69•4	74.4	76.0	12.5	4.8
27	61 • 1	65•9	69 • 5	73.4	75 • 6	12.3	4.8
29	63•6	68•3	70 - 4	75.2	77 • 4	11.6	4.7
31	65 • 1	69•8	71.6	77.1	78 • 7	12.0	4.7
33	66•0	71 - 1	72.5	78.3	79.2	12.3	5 • 1
35	66•9	71.9	73 • 1	78 • 8	79 • 3	11.9	5.0
37	67.7	72.7	74.6	79.9	79•9	12.2	5.0
39	68 • 4	73.4	75•5	81.0	81.5	12.6	5.0
41	69•2	74.8	76.8	82.6	88.6	13-4	5.6
43	70.9	76.0	77.9	83.8	84.3	12.9	5 • 1
45	72.5	77.1	79.1	84.6	84.6	12.1	4 - 6
oh →47	72.0	76•6	79.0	84.2	84.2	12.2	4.6
49	71.0	76 • 1	78 • 4	83.7	83.7	12.7	5.1
51	71.2	76.5	78.9	84.0	84.0	12.8	5.3
53	70•9	76.2	78•7	83.6	84.6	12.7	5 • 3
55	71.9	76.9	78•9	83.8	85.2	11.9	5.0
57	71.0	76 • 3	78 • 4	83.0	84.3	12.0	5.3
59	70 • 4	75.5	78.0	82.7	83.7	12.3	5 • 1
61	70 • 3	75.2	77.4	82.5	84.2	12.2	4.9
63	69.7	74.3	76.2	81.9	82.5	12.2	4.6
65	69•5	73.8	75•2	81.6	82.8	12.1	4.3
67	67.8	72.8	74.6	80.7	81.4	12.9	5.0
69	65.7	70 • 4	72.7	78.0	78 • 7	12.3	4.7
71	64.0	69•2	71.8	76+2	76 • 8	12.2	5.2
73	63.0	68 • 4	71.5	75 • 3	77.0	12.3	5.4
75	63•6	69 • 1	71.3	76.0	77.3	12.4	5.5
77	62.2	68 • 4	71 - 1	75.3	76 • 4	13.1	6.2
79	61.8	68•0	70.8	75 • 1	76 • 3	13.3	6.2
81	61 • 4	67.6	70 • 4	74-5	74.5	13.1	6.2
83	58.2	65.8	69.2	72.0	73 • 6	13.8	7.6
85	58 • 1	66.0	69.6	72 • 1	73 • 4	14.0	7.9
87	60 - 1	67 - 1	70.2	73.2	74.7	13.1	7.0
				· - <del>-</del>	• - •		

#### NOISE LEVEL TIME HISTORY DATA

BELL 47 G

OCTOBER 5, 1976

### EVENT 19, 6 DEGREE APPROACH, MIC. 150 METERS EAST

INT	DBA	DBD	OASPL	FNL	PNLT	DNI - DDA	5000 DDA
_						PNL-DB4	DBD-DBA
1	59.0	74.9	70 • 1	71.5	71 - 5	12.5	15.9
3	60 . 6	75 • 4	70 - 1	72.1	73 • 2	11.5	14.8
<b>5</b>	61.0	75.5	69.9	73 • 1	73 • i	12.1	14.5
7	64.9	78•4	71.5	75.7	75 • 7	10.8	13.5
9	66•6	79.7	72 • 1	76.5	<b>7</b> 8 • 2	9.9	13.1
11	65 • 2	78.9	72.1	75 • 6	77•7	10.4	13.7
13	64 • 8	78.5	71.9	75 • 4	77.0	10.6	13.7
15	64.3	78 • 5	72.1	75.5	76 • 6	11.2	14•∂
17	66 • 1	0.08	73 • 4	77.0	77.0	10.9	13.9
19	68+3	82.0	74.7	79.0	79•0	10.8	13.8
21	68 • 4	82 • 8	75.9	79.8	81.3	11.4	14.4
23	69•4	83.7	76.5	81.0	81.0	11.6	14.3
25	69•3	84.3	76.6	81.7	81.7	12.4	15.0
27	70 • B	85 • 5	77 • 1	83.0	84.5	12.2	14.7
29	71 -8	86 • 6	<b>7</b> 8 • 0	84.3	85.7	12.5	14.8
31	71.9	87 • 1	78.0	85.0	85.0	13.1	15.2
o4 →33	72.6	87.7	78.7	85.6	85.6	13.0	15.1
35	73.1	88.5	79 • 2	86•0	86.0	12.9	15.4
36	73 • 3	88 • 9	79 • 2	86 • 4	86 • 4	13.1	15.6
38	72.9	88 • 5	79 - 1	85 • ?	85.7	12.8	15.6
40	72.0	86 • 8	78 • 1	84.0	85.1	12.0	14.8
42	70 • 2	85 • 2	76 • 3	82.2	83.8	12.0	15.0
44	68 • 5	83 • 7	74 • 7	81 • 1	25.5	12.6	15.2
46	68 • 7	84 • 1	74.1	81 • 4	81 • 4	12.7	15.4
48	68 • 4	83.7	74.0	81 • 1	81 • 1	12.7	15.3
50	66 • 3	81 • 7	73 • 3	78 • 7	78 • 7	12.4	15.4
52	65.2	80 • 2	72.9	77.2	79.8	12.0	15.0
54 56	63 • 8	79.7	73.0	76 • 2	78 • 8	12.4	15.9
56	65+8	81.2	74+0	77.8	77.8	12.0	15.4
58 60	64.4	80 • 4	73•7 72•9	76 • 8	77.9	12.4	16.0
	62•6	79•1 78•9	72.9	75•4 75•1	75•4	12.7	16.4
62 64	62.9	79.2	72•8	75 • 5	75 • 1	12.5	16.3
66	62 • 1	78 • 6	72.3	75•5 75•1	76.6	12.6	16.3
68	61.3	78 • 4	72.3	74.7	76•6 76•1	13.0 13.4	16.5
70	61.7	78 • 6	72.2	75.0			17.1
72	62.1	78 • 5	72.0	75 • O	76 • 1 75 • 0	13·3 12·9	16•9 16•4
74	61.9	78.3	71.9	74+9	76.2	13.0	16-4
76	51 • 7	78-0	71.6	74.7	76 • 1	13.0	16.3
76 78	60 • 1	76.9	71.0	73 • 3	74.4	13.0	16.8
80	59 • 8	76.7	70 • 7	72.5	72.5	12.7	16.9
82	59•3	76.5	70.5	72.4	72.4	13.1	17.2
02	3743	,0•3	,0.5	1 5 8 04	1 6. 44	13.1	11.6

### TABLE C-I

#### NOISE LEVEL TIME HISTORY DATA

BELL 47 G

OCTOBER 5, 1976

#### EVENT 26, 60 MPH FLY BY, MIC. 150 METERS EAST

INT	DBA	บิยับ	OASPL	PNL	PNLT	PNL-DBA	DBD-DBA
1	62 • 3	77.4	73 • 1	74.3	75•9	12.0	15 • 1
3	62.3	77.3	73.2	74.3	75.9	12.0	15.0
5	64.4	78.9	73.2	75 • 6	75.6	11.2	14.5
7	64 • 6	79.4	73 • 1	75 • 9	77 • 1		14.8
9	65+9	80.5	74:0	77.2	79.4	11.3	14.6
11	65.7	80.5	74.5	77.5	79.5	11.8	14.8
13	66 • 5	81.3	75•0	78 • 1	79 • 7	11.6	14.8
15	. 67.4	82.1	75•9	78 • 6	78 • 6	11.2	14.7
17	68•9	84 • 1	76 • 7	80.9	82.2	12.0	15.2
19	69.5	84.6	77•3	81.8	81.8	12.3	15.1
51	71 - 4	86.3	78.0	83.7	85 • 1	12.3	14.9
23	72.8	87.7	78 • 4	84.9	85.9	12.1	14.9
25	73 • 4	88•5	78 . 6	85.9	85.9	12.5	15.1
0i  <del>→</del> 27	72.6	88•i	78 • 2	85•7	85.7	13.1	15+5
29	72 -8	89.0	78•9	86.4	86.4	13.6	16.2
31	73•5	89•6	79•0	87.0	87.0	13.5	16.1
33	72.9	86 - 1	78•7	85 • 4	85 • 4	12.5	15.2
35	73.2	88•2	79.0	85 • 3	85.3	12.1	15.0
37	72.6	88.1	78•8	85.1	85 • 1	12.5	15.5
39	<b>72.</b> 3	87.5	78.0	84 • 4	84.4	12.1	15.2
41	69.5	85.0	76.2	81.6	83.3	12.1	15.5
43	68 • 1	83.4	75•3	80 • 4	81.9	12.3	15.3
45	68•2	83•2	74.6	80.5	80.5	12.3	15.0
47	68 • 1	82.9	73•6	79.9	81.8	11.8	14.8
49	67•3	82•2	72•8	79.6	80.9	12.3	14.9
51	66.4	80.9	72•7	78•0	79 • 1	11.6	14.5
53	68 • 1	81.9	73.8	79 - 1	80.7	11.0	13 • 8
55	€5•5	79.7	72 • 3	76.5	77.5	11.0	14.2
5 <b>7</b>	65 • 1	79.3	71.8	76 • 2	78 • 5	11.1	14.8
59	68 - 1	81.9	72.9	79 - 1	81.3	11.0	13.8
61	66 • 8	80•9	72.4	78 • 0	80 • 1	11.2	14.1
63	64.7	79.3	71.9	75 • 9	77 • 4	11.2	14.6
65	63.7	78 • 4	71.8	75 • 4	76•6	11.7	14.7
67	63 • 7	78 • 5	71.6	75 • 2	76.5	11.5	14.9
69	61 - 2	77-4	71 • 0	74 • 1	75•4	12.9	16.2

# TABLE C-II

### NOISE LEVEL TIME HISTORY DATA

#### BELL 47 G

OCTOBER 5, 1976

### EVENT 30. 75 MPH FLY BY. MIC. 150 METERS EAST

INT	DB4	DBD	OASPL	PNL	PNLT	PNL-DBA	DBD-DBA
1	60.0	65.8	71.0	72.7	73.9	12.7 12.7 11.8	5.8
3	6). • 5	66.9	71.5	74.2	74-2	12.7	5 • 4
5	61.5	66.4	71-1	73.3	75.0	11.8	4.9
7	63.3	68.5	71.7	75.3	76.6	12.0	5.2
ģ	66.6	71.2	73.0	78 • 4	78 • 4	11.8 11.2 12.0 12.1	4 • 6
11	67.4	71.9	73.8	78 • 6	80.3	11.2	4-5
13	68.5	73.7	75.0	80 • 5	80.5	12.0	5.2
15	70.2	75-4	76.0	85+3	85 - 3	12-1	5 = 2
он 19 21 23 25	71.7	77 • 1	77.0	83.9	83•9	18.2	5 • 4
04 19.10	73.0	78.7	78.5	85.6	85.6	12.6	5.7
21	73.6	79.5	79.2	86•7	86•7	13-1	5•9
23	72.8	78.9	78•9	85•8	85•8	13.0	6 • 1
25	72.6	78.7	78•5	85•7	85•7	13.1	6 • 1
27	72.0	77.6	78•2	85.0	85.0	13.0	5•6
29	71-4	77.0	77.3	84.0	85 • 1	12.6	5 • 6
31	71.0	76.2	76.2	83•2	84•4	12.2	5•2
<b>3</b> 3	70 • 1	75 • 3	75•3	82.4	82.4	12.3	5 • 2
35	68.9	74•5	74.7	81.6	81.6	13.1 13.0 12.6 12.2 12.3 12.7 12.2 11.5 11.6 11.9 11.3 11.0 10.9 11.1 11.4 11.4 11.6 12.3 11.4	5•6
37	69-9	75•3	74 • 1	82.1	83.3	12.2	5 • 4
39	70.2	75-1	74-8	81.7	81 - 7	11.5	4 - 9
41	69•3	74.1	74 • 8	80•9	82 • 1	11.6	4 • 8
43	65.8	73.9	74•7	80•7	82•3	11.9	5 • 1
45	68•8	72.9	74.7	80 • 1	80 • 1	11.3	4 • 1
47	67.5	71•7	73•9	78.5	80.0	11.0	4.2
49	66+3	70.7	72.9	77.2	79.0	10.9	4.4
51	63.0	66 • 6	68•6	74 • 1	76 • 6	11.1	3 • 6
53	62.9	68 • 1	70 • 9	74.3	76 • 1	11.4	5+2
55	64.0	69 • 4	72 • 8	75 • 6	76 • 8	11.6	5+4
57	61.9	67.9	72 • 4	74.2	74.2	12.3	6.0
59	63 • 3	68 • 3	72.2	74 • 7	76 • 1	11.4	5.0
61	66 • 5	70 • 7	72 • 8	77.1	78 • 5	10.5	4.2
63	64.3	68+9	71.9	75.6	76.7	11.3	4.0
65	60 • 6	67.3	71 • 4	73.7	75 • 1	13.1	6.4
67	61.2	67.6	71 • 4	73.8	73.8	13.1 12.6 12.5 13.1 13.8	D•44
69	64+3	70 • 1	73.1	76.6	70.0	12.2	3 + O
71	63.5	. 69+7	72.6	70.6	70.6	10.0	7-1
73	60 • 8	67.9	71 • 0	74.0	74.0	13.0	7-9
75	60+6	67.8	10 • 3 60 - 7	74.5	74.5	13.9	1 * G 6 - K
77	60 • 3	00.9	64 • 1	13.9	13.9	13 • 6	0.0

### NOISE LEVEL TIME HISTORY DATA .

#### BELL 47 G

OCTOBER 5, 1976

# EVENT 31. 75 MPH FLY BY. MIC. 150 METERS EAST

INI	DBA	DEC	OASPL	PNL	PNLT	PNL-DBA	DBD-DBA
1	61.2	66.2	69•8	72.8	74.0	11.6	5•0
3	63 • 4	68.3	71 • 2	74.9	76.2	1: •5	
5	64.6	69 - 1	71.5	76 - 1	76 • 1	11.5	4.5
7	63.9	68 • 4	71.0	75 • 8	77.5	11.9	4.5
9	67.7	72.3	72.5	79 • 1	80.9	11-4	4.6
11	70 • 6	74.8	74+3	81.5	81.5	10.9	4.2
13	70•3	74.7	74.9	81.5	83 • 1	11.2	4 - 4
15	70 • 1	74.8	75.2	81.5	82.9	11-4	4.7
17	70 • 8	75.9	76.8	82.8	82.8	12.0	5 • 1
19	70•9	76.2	77.3	83.4	83•4	12.5	5•3
21	72.7	77 • 6	<b>7</b> 8 • 8	84.7	84.7	12.0	4.9
23	73.2	78.6	79.5	85.5	85.5	12.3	5 • 4
<b>0∦&gt;</b> 25	74.3	79.5	79•9	86.7	86.7	12.4	5•2
27	74.8	79.9	80.5	86.7	86.7	11.9	5 • 1
29	74.5	79•7	80 • 8	87.0	87.0	12.5	5.2
31	74.0	79.5	80 • 4	86 • 4		12.4	5.5
33	74 • 4	79.8	80.0	86 • 5	86 • 5	12.1	5•4
35	74.7	79.8	79•7	87.0	88 • 1	12.3	5 • 1
37	73 • 8	<b>78•</b> 8	78.9	85.7	87.1	11.9	5•0
39	73.3	77.6	77.9	84.5	85•7	11.2	4.3
41	72.2	76.7	76 • B	83.5	83.5	11.3	4.5
43	73.2	77.7	77 • 4	84.9		11.7	4.5
45	71 • 1	75.5	75.9	83.0	85.0	11.9	4 • 4
47	71.9	76 • 1	76.1	83 • 4	85.2	11.5	4.2
49	71.3	75•7	75.9	83.0		11.7	4 • 4
51	71 • 4	75•6	75.5	82.5	82.5	11-1	4.2
53	70•9	75.5	75•9	82.5	83-7	11.6	4.6
55	71.5	75.6	76.2	82.6	83.9	11.1	4 • 1
57	67•8	72.8	73•3	79.7		11.9	5•0
59	65+9	71.2	72.6	77•8		11.9	5•3
61	67-1	71.3	72.3			11.0	4.2
63	68•8	73 • 8	72.6	81.2		12.4	5•0
65	69•5	74 • 4	73.1	81.5	81.5	12.0	4.9
67	69.0	72.8	73 - 4	79•5	81 • 4	10.5	3 • 8
69	66•9	71.0	72.4	<b>77•</b> 8		10.9	4 • 1
71	64 • 6	69.2	71.0	75.9	75•9	11.3	4 • 6
73	62 • 4	<b>67 •</b> 8	69.7	74.3	74 • 3	11.9	5 • 4

#### NOISE LEVEL TIME HISTORY DATA

BELL 47 G

OCTOBER 5, 1976

EVENT 33. 75 MPH FLY BY. MIC. 150 METERS EAST

INT	DBA	DBD	OASPL	PNL	PNLT	PNL-DBA	DBD-DBA
1	62.6	67.8	71.8	74.2	76.0	11-6	5.2
3	62.9	67.9	71.8	74.8	76 • 4	11.9	5.0
5	64.6	69.5	72.3	76 • 4	76.4	11.8	4.9
7	66-3	71.5	73.3	78,2	80.0	11.9	5.2
9	68∙5	73.3	74.8	80.8	82.5	12.3	4.8
11	70.0	74.5	75.2	81.8	81.6	11.8	4 • 5
13	71-1	75.2	75•7	£2•3	84.2	11.2	4-1
15	72.4	76•6	77•3	83.4	84.6	11.0	4.2
17	72.6	77.3	<b>7</b> 8•0	84.6	84.6	12.0	4.7
19	72.2	77.2	78•5	84.7	84.7	12.5	5.0
21	73.1	78.3	79•7	85.9	85.9	12.8	5.2
on <del>&gt;2</del> 3	74.4	80.2	81.1	87.4	87.4	13.0	5 • 8
25	75.4	81.0	81.7	87.9	87.9	12.5	5 • 6
27	75.5	80 • B	81.8	87.9	89.0	12.4	5 • 3
29	75.1	80 • 7	81 • 4	88.0	88.0	12.9	5 • 6
31	76.5	82 • 0	81.8	89.1	89 • 1	12.6	5 • 5
32	77.0	82.4	82.0	89•6	89.6	12.6	5 • 4
34	75.4	80•5	80.8	87.9	87.9	12.5	5 • 1
36	74.4	79•8	79•6	87.1	88 • 2	12.7	5 • 4
38	74.1	79•3	79.2	86.6	86.6	12.5	5•2
40	72.8	78 • 0	77•7	85.0	ბა∙0	12.2	5 • 2
42	70.8	<b>75 • 7</b>	76.5	83.2	84.6	12.4	4.9
44	74.2	78•5	78.0	85+5	87.3	11.3	4.3
46	74.2	78•5	77.8	85.5	86.7	11.3	4.3
48	73 • 1	77•2	77•0	84.5	84.5	11 • 4	4 • 1
50	72.0	76•7	76 - 1	83.9	85 - 1	11.9	4.7
52	73.7	78.0	76 ° B	84.7	86•3	11.0	4.3
54	72.8	77 • 4	76.2	84.3	85.5	11.5	4.6
56	70•7	75 • 1	74.6	82.3	83.4	11.6	4 • 4
<b>5</b> 8	71.9	75.9	75.5	82.7	82.7	10.8	4.0
60	70•7	74.9	75.2	81.7	81.7	11.0	4.2
68	67 • 1	73.0	74.5	79.7	79.7	12.6	5.9
64	67.2	72.8	74.5	79.8	80.8	12.6	5•6
66	65 - 1	70 • 4	72.5	77.2	78 • 6	12.1	5•3
<b>6</b> 8	64 • 4	69•3	71 • 4	76.4	77.7	12.0	4.9
70	61.2	67 • 1	70.1	74.6	75.8	13 • 4	5•9
72	58 • 5	64.9	68.7	72.1	73.3	13.6	6 • 4

#### NOISE LEVEL TIME HISTORY DATA

BELL 47 G

OCTOBER 5. 1976

EVENT 36. 82 MPH FLY BY. MIC. 150 METERS EAST

INT	DBA	DBD	OASPL	PNL	PNLT	PNL-DBA	DBD-DBA
1	61.9	65.8	70 • 2	73.0	73.0	11-1	3 • 9
3	62.7	66.7	70 • 7	73.9	75.8	11.2	4.0
5	62.2	66.6	71 - 3	73 • 7	75 • 3	11.5	4.4
7	66+7	70.5	72 • B	77.5	79 • 0 •		3 • 8
9	66.7	70.7	72.9	77.8	79.2	11.1	4.0
11	67.1	71.5	73 • 3	78 • 5	78 • 5	11.4	4.4
13	69.5	73.6	74.6	81.1	83.0	11.6	4 • 1
15	69.8	74.3	75•0	81.4	81.4	11.6	4.5
17	71.4	76.0	76.5	82.6	84.2	11.2	4.6
19	71.8	76.3	77.3	82.9	84.5	11.1	4 • 5
21	72.0	76•6	77.9	83.9	83.9	11.9	4 • 6
23	73.8	78.0	79.0	85•4	<b>\$5•4</b>	11.6	4.2
25	74.0	78.5	79.3	85•5	85.5	11.5	4 • 5
oH <del>&gt;</del> 27	74.8	79.6	<b>79•</b> 8	86.9	86.9	12.1	4 • 8
29	74.5	79.5	80 • 2	86 • 8	86.8	12.3	5•0
31	74.6	79.5	80∙8	86.7	86•7	12.1	4.9
32	75.9	81.2	81 • 5	88.2	88•2	12.3	5•3
34	75.6	81.0	81.0	87.8		12.2	5 • 4
36	75.1	80.2	79•8	87.0	87.0	11.9	5 • 1
38	74.7	79.5	79 • 4	86•3	86.3	11.6	4 • 8
40	75.3	80•4	79•7	87 • 4	87•4	12.1	5 • 1
42	73.9	79.3	78.5	86 • 4	86 • 4	12.5	5 • 4
44	74.1	78•9	78 • 1	86•0	87.0	11.9	4 • 8
46	73.2	77•4	77 • 4	84•5	84.5	11.3	4 • 2
48	72•7	77•2	77.2	84.1	85•7	11-4	4 • 5
50	71.9	76•6	76•3	83•4	84.8	11.5	4 • 7
52	74.0	78.0	77•8	84.9	84•9	10.9	4.0
54	73.3	77•4	77.0	84.2	84.2	10.9	4 • 1
56	68 • 4	72.9	73•5	79•8	79.8	11-4	4 • 5
58	67.8	72.4	73 • 2	79.0	80 - 1	11.2	4.6
60	68 • 7	73.0	74•Ú	80.0	80.0	11.3	4 • 3
62	68∙₿	73.0	73•9	79.8	79.8	11.0	4.2
64	67.6	72.0	72.7	79.0	80 • 4	11-4	4 • 4
66	67.2	71.6	73 • 4	78 • 3	79.9	11.1	4 • 4
68	64.2	89.6	71.9	76.5	78.0	12.3	5 • 4
<b>7</b> 0	63.2	68 • 7	71 •2	75 • 3	76 • 7	12.1	5 • 5
72	65 • 1	70.0	71 - 2	76 • 3	76 • 3	11.2	4.9
74	64.2	69.3	70.9	75 • 4	76.9	11.2	5 • 1

#### NOISE LEVEL TIME HISTORY DATA

BELL 47 G

OCTOBER 5, 1976

#### EVENT 41, 9 DEGREE APPROACH, MIC. 150 METERS EAST

INT	DBA	DBD	04SPL	PNL	PNLT	PNL-DBA	DBD-DBA
1	57.9	63 • 6	68.2	70 • 9	70 • 9	13.0	5.7
3	60 • 2	65.8	70 - 1	73 • 3	74.3	13-1	5•6
5	60 • 6	66.8	70.9	73 • 2	74.7	12.6	6•2
7	62.9	68-4	72.2	75 • 3	77.1	12.4	5•5
9	66 • 4	69.8	72.4	77.0	79•5	10.6	3 • 4
11	65 • 4	68.9	71.5	76 • 2	78•6	10.8	3.5
13	66.6	70.0	72.3	76.9	79.2		3 • 4
15	63 - 1	67.7	71.4	<b>75•</b> 0	76•3	11.9	4.6
17	60 • 4	66.0	70 • 8	73 • 3	73.3	12.9	5•6
19	61.7	66.7	70.7	73.9	75.2	12.2	5.0
21	63.9	69.0	71.6	75•8	77.3	11.9	5 • 1
23	63 • 8	69.2	71.9	76•0	77.6	12.2	5 • 4
25	63.9	68•6	72.2	75 • 6	77.4	11.7	4.7
27	65.9	70.2	73.7	77.4	79.2	11.5	4.3
29	65•9 69•2	73.8	75.9	80.2	80.2	11.0	4.6
31	71 •8	76.0	78-1	88.9	82.9	11.1	4.2
33	69.6	74.3	76.8	81 • 6	81.6	12.0	4.7
35	68•2	73.6	75.6	80•9	80.9	12.7	5 • 4
37	69.8	75•2	76.7	82.3	82.3	12.5	5 • 4
39	70 • 1	75.7	76.8	83.0	83.0	12.9	
41	7C • 7	76.2	77•5	83•7	83•7		
43	73 • 1	78•6	79•7 80•5	85•9 86•5	85.9	12.8	
OH 45	74 • 1	79•4	80.5	86 • 5	87.6	12.4	5 • 3
47	72.2	77•8	78.2	85 • 0	85.0	12.8	
49	71.2	77.3	77.8	84.2	84.2	13.0	6 • 1
51	71.5	77.8	78•0	84.9	84.9	13.4	6.3
53	71.3	77 • 4	78 • 4	84.1	84.1	12.8	
55	71 • 5	77•3	78 • 4	84 • 3	85•7	12.8	5 • 8
57	71 - 4	76.8		83.9		12.5	
59	69.2	74.5	76 • 1	81.5	82.7	12.3	
61	67•7	<b>7</b> 3•0	<b>7</b> 5•0	79 • 6	80.8	11.9	
63	67 - 1	72.3	73.8	79•3	79•3	12.2	5.2
65	66•8	72 • 1	73•7	78.9		12.1	
67	67 • 1	72.9	74 • 1	79•8	80•9	12.7	
69	65 • 5	71-1	73.1	77 • 2	79.1	11.7	5 • 6
71	65•1	70•6	72•7	76.7	77.9	11.6	5 • 5
73	62.3	68•8	71.8	74.9	76 • 4	12.6	6 • 5
<b>7</b> 5	61.0	68•3		74.4	74.4	13-4	7 • 3
77	61.5	68 • 4	71.8	74.7	74.7	13.2	6 • 9
70	ደብ ወ	47.7	70.8	7/1.1	74.1	: 3 - 3	6.9

# TABLE C-Y

#### NOISE LEVEL TIME HISTORY DATA

BELL 47 G

OCTOBER 5. 1976

EVENT 19, 6 DEGREE APPROACH, CENTERLINE MIC. ( SOFT SITE )

INT	D84	DBD	OASPL	PNL	PNLT	PNL-DBA	DBD-DBA
1	65•9	69.8	72.2	76 • 8	78 • 2	10.9	3.9
2	65.9	70 • 5	72.8	77.2	79.2	11.3	4.6
3	66.8	71.4	73.2	77.9	80.2	11.1	4-6
4	68.7	72.9	74.1	78 • 9	81.2	10.2	4.2
5	70.3	73 • 8	74.9	80.3	82.7	10.0	3.5
6	71.0	74.6	75.9	81.1	83 • 3	10 • 1	3.6
7	70.8	74.5	76.0	81.0	82.8	10.2	3 • 7
8	70.4	74.3	76.0	80.7	81.7	10.3	3.9
9	71.8	75.8	77.5	82.3	82.3	10.5	4.0
10	72.9	77.0	78.6	83.8	83.8	10.9	4 • 1
11	74.6	78 • 5	79.4	85 • 1	85 • 1	10.5	3.9
12	74.7	78.9	79.5	85.5	85 • 5	10.8	4.2
13	75.1	79 • 4	80.0	85.7	85.7	10.6	4 • 3
14	75.0	79.6	80.6	85 • 8	85.8	10.8	4.6
15	75.1	80 • 1	81.4	86 • 4	86 • 4	11.3	5•0
16	75.9	80.9	82.2	87.8	87.8	11.9	5.0
17	76.7	81.6	83 • 1	88.8	88 • 8	12.1	5 • 1
18	76.0	83.3	84.2	89.5	89.5	11.5	5•3
19	78.2	64.0	84.9	89.9	89.9	11.7	5•8
20	78.3	84.2	85 • 4	90.7	90 • 7	12.4	5•9
21	78.1	84.0	85.5	91.2	91.2	13 • 1	5•9
22	78.3	84 • 1	85.8	91.5	91 • 5	13.2	5•8
oH -→23	78.5	84.3	86.C	91 • 6	91 • 6	13.1	5•8
24	78 - 1	84.3	86 • 3	91.6	91 • 6	13.5	6 • 2
25	77.7	83 • 8	85.9	91.4	91.4	13.7	6 • 1
26	77.0	83•5	85.7	91.2	91 • 2	14.2	6•5
27	77.1	83.6	85.5	91.1	91 - 1	14.0	6 • 5
28	76.9	83 • 6	85•7	90•8	90•8	13.9	6•7
29	76.7	83.0	85•3	90 • 4	90 • 4	13.7	6 • 3
30	76.2	82.0	84.5	89.3	89•3	13.1	5•8
31	75.8	81.3	83.4	88 • 4	89 • 5	12.6	<b>5•</b> 5
32	75.1	80 • 8	82.0	88•2	89.6	13.1	5•7
33	74.0	80.0	80.3	87.7	89.2	13.7	6.0
34	72.2	78 • 4	78•4	86•3	87•7	14+1	6.2
35	70.7	76•6	76.7	83.7	83.7	13.0	5•9
36	69.4	74.7	75•4	81 • 7	82.9	12.3	5 • 3
37	70.0	75.2	76 • 4	82.4	83.7	12.4	5•2
38	71.0	76 • 1	77.2	83.0	84.6		5 • 1
39	70.8	75•9	77.1	82.9	84.2	12.1	5 • 1
40	69.7	75.0	76•0	82.1	82 • 1	12.4	5•3
41	67.9	<b>73</b> • 3	74.9	80.5	80.5	12.6	5 • 4
42	66.9	72.6	74.7		78 • 9		5 • 7
43	66.8	72.2	74.5	78.3	78 • 3	11.5	5 • 4

# TROLE C-V

### NOISE LEVEL TIME HISTORY DATA

BELL 47 G

A Company of the Contract

OCTUBER 5, 1976

# EVENT 26, 60 MPH FLY BY, CENTERLINE MIC. ( SUFT SITE )

INT	DBA	DBD	OASPL	PNL	PNLT	PNL-DB4	DBD-DBA
1	65•5	71.5	75 - 1	78 - 1	78 - 1	12.6	6.0
2	66 • 5	72.6	75.7	79.5	79.5	13.0	6 • 1
3	66 • 6	72.8	76.5	79.8	79.8	13.2	6.8
4	66 - B	73.3	77.0	80.3	80.3	13.5	6.5
5	68 • 7	75 - 1	77.8	81.6	81.6	12.9	6 • 4
6	71.0	77 - 1	79 - 1	84.0	84.0	13.0	6 • 1
7	73 - 1	79.4	80 • 5	86.0	87.2	12.9	6 • 3
8	74-1	80 • 5	81.3	87.5	87.5	13.4	6 • 4
9	74.9	81 • 6	82.1	88 - 4	89 • 4	13.5	6 • 7
10	75+8	82.3	82.5	89.3	90 5	13.5	6 • 5
11	76-2	82 • 4	82.7	89.2	90.5	13.0	6.2
12	76.3	82 • 4	82.6	8+68	89.2	12.9	6 • 1
13	76 - 1	82.2	82.7	89.3	89•3	13.2	6•1
OH>14	76.3	82 • 8	83 • 1	89.7	89.7	13.4	6•5
15	76 • 1	83.0	83+6	89.9	89•9	13.8	6•9
16	75.9	83.0	83.6	89.8	89∙8	13.9	7 • 1
17	76.2	83 • 3	83.5	89.8	89.8	13.6	7 - 1
18	76 • 1	82.9	82.9	89 • 5	89.5	13.4	6+8
19	75•9	82.2	82.5	88.7	88-7	12.8	6 • 3
20	75.3	81 • 1	82.1	87.6	87.6	12.3	5•8
21	75 • 4	80.9	81.9	87.3	88.7	11.9	5•5
22	75 • 4	81.0	81.4	87.6	88.8	15.5	5 • 6
23	75 • 4	60∙3	80 • 2	87.6	88-6	12:2	5 - 4
24	74.7	80 • 1	79•0	86.9	86.9	12.2	5 • 4
25	73.8	78•8	77.5	85•8	85•8	12.0	5.0
26	72.0	76.9	76.3	83.8	83.8	11 <b>-</b> B	4.9
27	71 • 6	76•0	75•7	82.6	82-6	11.0	4.4
28	71.6	75•8	75•7	81.8	83 • 1	10.5	4.2
29	71 • 4	75•6	75.8	81.7	83.3	10.3	4.2
30	71.2	75•7	76.0	81.9	83•3	10.7	4.5
31	71.9	76•5	76.6	82.7	84.2	10.8	4.6
32	72 • 3	77•0	76.8	83.0	84.2	10.7	4.7
33	71.5	76 • 1	75•9	82•3	82•3	10•8	4.6
34	69•8	74.4	74•3	80.8	80.8	11.0	4.6
35	67•7	72•3	73.0	79•5	81 • C	11.8	4.6
36	66-1	71 • 1	72•7	78 • 4	80.2	12.3	5•0
37	64.7	70.0	72.7	77•8	79.4	13.1	5 • 3
38	66•6	71.4	73 • 1	78 • 8	79.8	12.2	4•8
39	68•2	72.7	73.9	80.0	80.0	11.8	4.5
40	69.0	73.8	74 • 1	80 • 7	80.7	11-7	4.8
41	68 • 8	73.5	74.0	80 • 5	80.5	11.7	4 • 7
42	67•9	72.6	73 - 7	79•6	81.0	11.7	4.7
43	67.2	71.4	73 • 6	78 • 8	80 • 3	11.6	4.2
44	66 - 1	70 • 5	73.2	78 • 1	79.6	15.0	4.4
45	64.8	69 • 6	72.5	77 - 1	78 • 4	12.3	4.8
46	62.9	6B•1	71.7	76•0	77.2	13.1	5•2

# TABLE C-II

#### NOISE LEVEL TIME HISTORY DATA

BELL 47 G

OCTOBER 5, 1976

EVENT 28. 68 MPH FLY BY. CENTERLINE MIC. ( SOFT SITE )

INT	DBA	ดยด	OASPL	PNL	PNLT	PNL-DBA	DBD-DBA
1	66•1	72.3	74.2	79.4	80.5	13.3	6 • 2
2	66.8	73 - 1	74.6	80.3	81.3	13.5	6.3
3	67.8	74.0	75.1	81.3	81.3	13.5	6.5
4	69.3	75-8	76.3	82.9		13.6	6.5
5	71.3	77.7	77.9	84.7	85.7	13.4	6 • 4
6	73.2	79.9	79.6	86.9	86.9	13-7	6 - 7
7	75.3	82 • 1	01.3	88.8			6.8
8	76•3	83 • 2	82.5	90.0	91.3		6.9
9	76.9	83 • 6	83.0	90 • 3			6.7
<b>of</b> → 10	77.4	83.7	83 • 4	90•6	90 • 6	13-2	6 • 3
11	78•3	84.2	83.8	91 • 4	91 • 4	13.1	5.9
12	<b>7</b> 8•5	84.5	84.2	91.8	91.8	13.3	6.0
13	78 • 4	84.7		92 • 1			6•3
14	78•3	84.8	84 - 1	92.1	92.1		6 • 5
15	77•9	84 • 4	83 • 8	91 • 7	91 • 7		6.5
16	77.5	83.6	83.5	90•8	90•8	13.3	6 • 1
17	<b>76</b> • 5	82.3		89.2	89.2	12.7	5 • 8
18	76•3	81.4	81.8	88.3	89•7	12.0	5 • 1
. 19	76.0	81 • 3	80.7	88•6		12.6	5 • 3
20	75.9	80•8		88•3			4.9
21	75•3	80 • 5	79 - 1	87•9			5•2
22	74.7	79 • 6	<b>78 •</b> 3	86•8		12.1	4.9
23	75.0	79•7		86•7		11-7	4-7
24	74.3	79•0	77.5	85•8		11.5	4.7
25	73.9	78.5	77.3	85.0		11-1	4 • 6
26	73.3	78.0	77 • 1	84-1	85.5		4.7
27	74.2	78.8	77.7	85.0	86.6	10-8	4 • 6
88	74 • 1	78 • 7		85 • 1	86.3	11.0	4.6
29	73.6	78 • 3	77 • 7	84.7		11-1	4.7
30	73 • 1	77.4	77.1	83.5	83.5	10-4	4.3
31	74.1	77.8	77.2	84.3			3.7
32	74.0	77.6		84.2			3 • 6
33	73.2	77.0	76.3	83.6	85.7		3 • 8
34	71.0	75.4	75 • 2	81 • 7			4 • 4
35	69.9	74.4	75.0	80.8			4.5
36	69.4	73.9		80.6			4 • 5
37	68•7	73.5	74.8	79•7	81.6	11.0	4.8

TABLE C-V

#### NOISE LEVEL TIME HISTORY DATA

BELL 47 G

OCTOBER 5, 1976

#### EVENT 29, 68 MPH FLY BY, CENTERLINE MIC. ( SOFT SITE )

INT	DBA	DBD	OASPL	PNL	PNLT	PNL-DBA	DBD-DBA
1	64.8	69•8	73•9	76 • 8	76.8	12.0	5•0
3	66 • 1	71 • 6	73 • 8	78 • 8	78 • 8	12.7	
5	67.5	73 • 6			80.9	13.4	
7	68.7	74.7	76.7	82.4	82.4	13.7	
9	71.4	77.5	78.5	84.4	84.4	13.0	6 • 1
11		80 • 7		87.7	87.7	13.3	6 • 3
OH 13 14	76.3			89•7	91.2	13.4	6 • 1
9 11 0H 13 15 17	76•7	82 • 5		89.8	91.0	13.1	5+8
17	77.2	83 • 1	82•9	89.9	89.9	12.7	5•9
4.9	78 • 1	84.2	84•0	91.3	91.3	13.2	6 • 1
20	78.5	84 • 8	84-4	91.9	91.9	13.4	6•3
22	77•7	84.0	83 • 4	91 • 1	91 - 1	13.4	6•3
24	77.5	83 • 4	82.2	90.7	90•7	13.2	5•9
26	77•2	83.2	81.3	90.2	90 • 2	13.0	6•0
28		81.7		89.0	89•0	12.7	5 • 4
30		80.5		86.7	86-7	11.2	
32	75•4	79.9		85 • 1	86 • 1	10.7	4 • 5
34	74.3	79.0	<b>77</b> •8	85•5	85.5	11.2	4.7
36	72.3	77.2	76.0	83.9	83.9	11-6	4.9
38			75 • 5				4.5
40	72 <b>.7</b>	77.2	76.8	83.7	83.7	11.0	
42	74.7	78•7	77.5 77.1	85•3	85+3	10.6	
44	74.5	78•8	77 • 1	85 • 4	86•7		
46		76.7		83.2			
48		74-1		80.7			
50	69.7	74.3		81.4	82.5		4.6
52	68•7	73 • 1	72.9	80.3	81.7	11.6	4.4
54	69 • 6	73.9	73•3	80.2	81.7		4.3
56		73.6				10.5	
58	66 • 7	70.2	71.0	77.4	77•4	10.7	3.5

# TABLE C-I

#### NOISE LEVEL TIME HISTORY DATA

BELL 47 G

OCTOBER 5, 1976

EVENT 30. 75 MPH FLY BY. CENTERLINE MIC. ( SOFT SITE )

1 10 1	DBA	DBD	OASPL	PNL	PNLT	PNL-DBA	DBD-DBA
1	60.0	65•7	71 • 0	72.8	73•9	12.8	5 • 7
3	62.7	68 • 1	72.6	75 • 3	75 • 3		5.4
5	65.1	70•9	74 • 1	77.7	77 • 7		5 • 8
7	68.2	74.7	75 • 8	81.5	81.5		6.5
9	70.9	77•5	78 • B	84.7	85.9		6.6
11	73.4	79.9	81.5	87.5	87.5		6.5
oh <del>&gt;</del> 13	75.1	81.5	82 • 4	89.0	90 • 1		6 • 4
15	75.9	82.2	82 • 8	88.9	90 • 7		6-3
17	75.5	82.2	82.8	89.3	89.3		
19	75.4	81.8	81.9	89.0	90 • 1		6 • 4
21	74.2	80.0	80 • 1	87.0	88.7		5 • 8
23	72.0	77.2	77.0	84.2	85 • 4		5.2
25	70.0	75.2	74.3	81.8	81.8		5.2
27	69.9	75.2	74.4		81.9	12.0	5 • 3
29	70.1	74.8	74.0	81 • 4	81.4		4.7
31	70.4	74.7	74.4	81.3	81.3		4-3
33	74.3	78.3	77.6	84.6	84 • 6		4.0
35	72.7	76.9	77 • 1	_	85 - 1		4.2
37	69∙0	73.7	74-7				4.7
39	71.4	75.6	75 • 4	82.0	83 • 4		4.2
41	72.0	75.7	75.6	81.9	83.6		3.7
43	69.3	73.6	74.0	80.4	82 - 1		4.3
45	62.7	67.9	68 • 3	74.6	74.6		5.2
47	68 • 1	72.5	73.0	79.0	80-6	-	4.5
49	66.9	71.3	72.6	78.0	80 • 1		4.4
51	63.1	68.2	70.8	74.4	76 • 1		5 • 1
53	62.6	67.8	70•7		75.7		5.2
55	62.5	68-1	70.6	74.7	76-1	12.2	5.6

TABLE C-I

#### NOISE LEVEL TIME HISTORY DATA

BELL 47 G

**OCTUBER 5. 1976** 

# EVENT 31. 75 MPH FLY BY. CENTERLINE MIC. ( SOFT SITE )

INT	DBA	DBD	OASPL	PNL	PNLT	PNL-DBA	DBD-DBA
1	62.5	68 • 4	73.9	75 • 1	76•3	12.6	5.9
3	63.0	68 • 8	73.8	75.9	75.9		5+8
5	66.2	72.5	75.1	79.3			6 • 3
7	67.3	74.2	75•9	81.3			6.9
9	68•4	74.8	76•5	82 • 1	83.3	13.7	
11	72.5	78.5	79.5	85.7	85•7	13.2	
13	75.2	81.4	81.9	88.4	88 • 4	13.2	6 • 2
of $\frac{15}{17}$ 16	76.7	82.5	82.8	89•7	91.0	13.0	5•8
	76.8	82.6	82.9	89.6	90•8	12.8	5 • 8
19	77.1	83 • 1	83.3	90 • 1	90 • 1	13.0	6•0
21	77.7	83.5	83.3	90.7			5 • 8
23	77.5	83.5	82.8	90•4	91.9	12.9	6•0
25	77.0	82.7	81.9	90•0	91 • 3		5 • 7
27	75.5	81 - 1	80.3	88.2			5 • 6
29	75.6	81 • 1	80.2	88.0	88•0	12.4	5•5
31	73.2	77.7	<b>78 •</b> 0	84.5	84.5	11.3	4.5
33	71.2	76•0		82.3	82.3		
35	72 • i	77 • 6		83•7	83.7	11,-6	5 • 5
37	72.7	77•5			85•4	11.4	4 • 8
39	72 - 1	76.2		82.9	82.9	10-8	4 • 1
41	71.2	75.5		82.0	83.2	10.8	4 • 3
43	68.5	73 • 1	73.0		80 • 8		
45	66•6	72.0	72.4	78.2	79 • 4	11.6	5 • 4
47	68.9	73.7	73.6	80 • 1	80 • 1	11.2	
49	72.4	76.3	75.7		82 • 6		3.9
51	72.1	75•6		82.6	83 • 6		3 • 5
53	70.0	74-1	73.8	80 • 8	82.5		4 • 1
55	72.8	76.2	75 • 7	82.5	84.0		3 • 4
57	69•4	73 • 1	73.8	79•4	80.8		3.7
59	63 • 6	69.5	71.5	75•3			5.9
61	65+0	70 • 4			77 • 6		5•4
63	66•1	70.7	71 - 8	76.7	78 • 7	10.6	4.6

# TABLE C-I

#### NOISE LEVEL TIME HISTORY DATA

BELL 47 G

OCTOBER 5, 1976

EVENT 33, 75 MPH FLY BY, CENTERLINE MIC. ( SOFT SITE )

INT	DBA	DBD	OASPL	PNL	PNLT	PNL-DBA	DBD-DBA
2	66.2	72.6	76•3	79.8	79.8	13.6	6 • 4
3	67.0	73.5	76.9	80.8	80.8	13.8	6.5
4	67.9	74.3	77.1	81.8	81.8	13.9	6 • 4
5	68+9	75 - 1	77 • 1	82.7	82.7		6.2
6	70.3	76.2	77 • 6	83.7	83.7		5.9
7	71.8	77.7	78 • 7	85.3	85.3	13.5	5-9
8	73.2	79.5	79 • 6	87-0	87.0		6.3
9	. 74.8	81 - 1	80.8	88.3	88.3		6.3
10	76.3	82.4	81 • 8	89.4	89.4		6-1
11	77.0	83.0	82.5	90.0	90.0		6.0
12	77.3	83.5	83.0	90 • 5	90.5		6.2
$ah \longrightarrow 13$	77 • 4	83 • 7	83.3	90 • 6	90.6	13.2	6•3
14	77.7	83 • 8	83 • 3	90 • 5	90 • 5	12.8	6 • 1
15	78.0	84.0	83 • 4	90.8	90.8	12.8	6.0
16	78•6	84.7	83 • 8	91 • 7	91.7	13+1	6 • 1
17	78.7	84 • 8	84•2	92.0	92.0	13.3	6 • 1
18	78 • 4	84.5	84.2	91.7	91.7	13.3	6 • 1
19	77.9	83 • 8	84.0	91.1	91.1	13.2	5•9
20	77.8	83.9	83.7	90.9	90.9	13.1	6 • 1
21	78 • 1	84•0	83 • 6	91.2	91.2	13.1	5•9
22	78.3	84.0	83 • 2	91.2	91.8	12.9	5 • 7
23	78•9	84.4	83.0	91.6	91.6	12.7	5 • 5
24	78•6	83.9	82.2	91.1	91.1	12.5	5 • 3
25	77.7	82.9	81 • 4	90.2	90.2	12.5	5 • 2
26	76•7	81 • 8	80.5	89.2	89.2	12.5	5 • 1
27	76.6	81 • 1	80.0	88.5	88.5	11.9	4.5
88	76.4	80 • 8	79.5	88 • 1	88.1		4 • 4
29	75.4	79.6	76 • 5	86.7	86.7	11.3	4.2
30	74.0	78 • 6	77.9	85•6	85.6		4.6
31	74.0	78.5	78 • 1	85.0	86.1		4.5
32	75.0	79.6	78•9	86 • 1	86 • 1		4-6
33	75.4	80 • 1	79•1	86 • 5	87.6		4.7
34	74.6	79•3	78 • 4	85 ∙ 6	86.8	11.2	4.7
35	72.9	77.3	77•0	84 • 1	84•1		4 • 4
36	71.7	76.2	<u>_</u> 75•6	83.2	83.2		4.5
<b>37</b>	71.5	76.2	75+5	83.1	84-1		4.7
38	71.4	76 • 1	75 • 7	83 • 1	84.6		4 • 7
39	72.0	76.3	76 • 2	83.2	85.0		4.3
40	72.4	76 • 1	76 • 2	83•1	84.4		3 • 7
41	72.2	76.0	75•9	82.8	85.8		3 • 8
42	70.9	74.9	75.0	81.8	81.8		4.0
43	69•1	73.7	74.2	80 • 4	81.4	11.3	4 • 6

TABLE C-V

#### NOISE LEVEL TIME HISTORY DATA

BELL 47 G

OCTOBER 5: 1976

#### EVENT 36. 82 MPH FLY BY: CENTERLINE MIC. ( SOFT SITE )

INT	DBA	aea	UASPL	PNL	POLT	PNL-DBA	DBD-DBA
1	62 - 1	67.1	71 • 3	74.3	74 = 3	12.2	5.0
3	64.8	70.2	73.9	77.2	77.2	12.4	5.4
5	67.2	73.0	74.8	80 • 2	80.8	13.0	5 - 8
7	67.9	74.4	75 • 1	81.5	81.5	13.6	6.5
9	71.7	77 <b>- 7</b>	78 • 2	84.9	86.0	13.2	6.0
11	74.9	81.0	80.8	87.8	87.8	12.9	6.1
13	75 • 4	81.5	81.8	88 • 5	88.5	13.1	6.1
OH ->15	76.7	82.9	83.0	89.9	89.9	13.2	6.2
17	77.5	83.9	83 • 4	91 • 1	91 • 1	13.6	6-4
18	77.8	84.0	83.5	91.2	91.2	13.4	6.2
20	77.3	83 • 4	83.0	90.5	90.5	13.2	6.1
22	77 • 4	82.9	82.2	90.1	90 - 1	12.7	5.5
24	76.9	82.6	81.4	89.9	89.9	13.0	5.7
26	76.0	81.4	80 • 4	88.6	88 • 6	12.6	5.4
28	75.9	80 <b>•9</b>	79.6	88.1	88 - 1	12.2	5.0
30	75.0	79.6	78 • 1	86.0	87.1	11.0	4.6
32	75 • 1	79.7	78.3	86.2	86.2	11-1	4.6
34	71 • 7	76.5	75.9	83.0	84.2	11.3	4.8
36	68 • 1	73.2	74.0	79.9	81.4	11.8	5 • 1
38	70.9	75.9	75 • 1	82.6	82.6	11.7	5.0
40	71.8	76.5	74.9	82.9	84.6	11.1	4.7
42	70.8	75.1	74.5	81.3	82.7	10.5	4.3
44	68 • 4	73.0	73.2	79•7	79.7	11-3	4.6
46	70.2	74.6	73.9	81.3	81.3	11-1	4.4
48	71 • 6	75 • 1	74.9	81.8	83.4	10.2	3.5
50	68 • 1	72.4	73.6	79 • 4	80.9	11.3	4.3
52	65 • 4	70.2	72.1	77 • 1	77.1	11.7	4.8
54	63.9	69.5	71.3	75.8	77.0	11.9	5•6
56	66 • 4	71.2	72.5	77 • 1	78 - 7	10.7	4.8

# TABLE C-I

#### NOISE LEVEL TIME HISTORY DATA

BELL 47 G

OCTOBER 5, 1976

EVENT 41: 9 DEGREE APPROACH: CENTERLINE MIC. ( SOFT SITE )

INT	DBA	DBD	OASPL	PNL	PNLT	PNL-DBA	DBD-DB4
1	65+3	71.5	74.7	78 • 4	78 • 4	13.1	6.2
2	66•4	72.6	75•3	79.4	79.4	i3.0	ŝ•ŝ
3	66•9	73 • 4	75 • 8	80 • 1	80 • 1	13.2	6.5
4	67.3	74.0	76•3	80.8	80.8	13.5	6 • 7
5	68•4	75 • 1	77.0	81.8	81.8	13.4	6.7
6	71.2	77 • 4	79•0	84 • 0	84.0	12.8	6.2
7	73.7	80 • 1	81.8	86.9	86.9	13.2	6 • 4
8	76•9	82 • 7	83•9	89.2	69.2	12.3	5 • 8
9	78.0	83.8	85.0	90 • 4	90 • 4	12.4	5.8
10	<b>7</b> 8•5	84.3	85+4	90∙8	90.8	12.3	5.8
11	77•3	63.5	84.7	90 • 1	90 • 1	12.8	6 • 2
21 <del>← 1</del> 0	75.9	82•4	83.6	89.2	90.2	13.3	6.5
13	74 - 4	81.0	82+1	87.9	88.9	13.5	6 • 6
14	74 - 1	80•6	81.5	87.6	87.6	13.5	6.5
15	73.9	80•3	81 • 4	87.7	08.7	13-8	6 • 4
16	74.0	80 • 3	81.5	87.7	89.0	13.7	6 • 3
17	73.9	80 + 2	81 • 6	87.7	87.7	13.8	6•3
18	74.0	80 • 1	81 • 4	87.5	88.7	13.5	6 • 1
19	73 • 4	79•7	81 • 2	87.0	88 • 1	13.6	6•3
20	73 - 1	<b>79•</b> 3	80 • 8	86.6	87.7	13.5	6.2
21	72.2	78•5	80 • 4	85•8	85•8	13.6	6.3
88	71 • 6	77•9	79-8	84.9	84.9	13.3	6 • 3
23	71.0	77 • 4	79 • 1	84.2	84.2	13.2	6 • 4
24	71.2	77 • 4	78.3	84-3	84.3	13-1	6.2
25	7., 1	77 • 1	77•3	84.0	84.0	12.8	5•9
26	70∙8	76 • 4	76.5	83 • 1	84 - 1	12.3	5•6
2 <b>7</b>	69∙ઇ	75.2	75•7	81.7	83.1	11.9	5 • 4
23	69•7	74•5	75 • 1	81.1	83.0	11-4	4.8
29	69•5	74 • 1	74•7	80•9	82.7	11.4	4.6
30	69•2	73•7	74.4	80 • 4	81.9	11.2	4 • 5
31	68•2	72.6	73.9	79 • 4	79.4	11.2	4.4
32	67.2	71.3	73.4	78 • 5	79.8	11.3	4 • 1
33	66 ( 3	71.1	73.0	77.8	79•5	11-5	4 • 8

# TABLE C-VI.

# NOISE LEVEL FREQUENCY SPECTRA TIME HISTORY

BELL 47 G

OCTOBER 5, 1976

EVENT 19, 6 DEGREE APPROACH, MIC. 150 METERS WEST

1/3 OCTAVE FREQUENCY BAND VS TIME (SECONDS)
(DB RE 20 MICRO PA)

BAND	-15.5	-11.0	<b>~6•</b> 5	-2.0	0	2.5	7-0	11-5	16.0	17.5
17	57.0	62.2	60.9	62•3	67.4	68 - 1	61.0	55.6	58 • 5	55 • 6
18	61.0	59.9	63.5	65.8	66.7	65 • 1	65.4	63.3	61.9	61.9
19	62.2	62.9	64.0	66 • 7	67.7	66.2	62.9	61.3	58 • 7	58 <b>- 7</b>
20	56.9	55 • 6	56.2	60 • 1	59.5	63.7	62.8	62.3	58.8	59 • 5
21	55.2	55.0	55.2	57.9	59.5	61.7	64.1	66.6	69.6	68 • 6
22	61.0	58 • 8	56 • 1	66.2	67.4	63.2	64.7	66.0	64.1	63 • 1
23	54.2	54.0	60.8	68 • 5	72.8	72.7	59.8	67 <b>.7</b>	68.2	67 • 8
24	55 • 1	60 • 8	68•6	75.2	76.2	73.8	60.0	63.6	61.8	62 • 1
25	57.9	65•4	69.7	71.3	71.3	71.9	64.1	58.9	58.7	59 • 1
26	63•5	69.9	$70 \cdot 1$	66.9	70.5	65 • 3	66.3	57.6	58.9	57 <b>· 7</b>
27	63.5	69•4	65.9	72.4	73 • 4	70•9	64.6	58 • <b>6</b>	56 • 4	56.0
88	57•0	61.1	68.0	66•5	67.5	66•8	58.0	61 • 1	53 • 1	52.3
29	54.4	65.2	60.8	67.1	68 • 4	65•4	61.3	59 • 6	49.7	49•8
30	51.8	57.4	61.4	64 • 4	65∙8	63.0	58.8	54.0	50.1	48.9
31	53.9	62.2	60.7	63.2	64.7	62.2	59.7	51 • 4	52.2	49.2
32	50•3	61.5	59.2	61.7	62 • 1	60 • 1	56.1	51.9	49.8	44.8
33	45 • 4	55-4	55.8	59.7	59.9	59.5	56.3	48 • 7	50 • 1	48 • 6
34	42.9	54.2	56 • 3	59.7	59•4	<b>59 •</b> 3	55.2	47.4	43.1	47.9
35	36.9	51.9	53 • 1	55 • 1	56.0	55∙ଞ	51.1	41 • 1	39•4	36•6
36	35•0	45.4	46.6	51.9	53 • 4	53 • 3	47.0	36 • 4	35•3	35.0
37	35.0	39.2	40.2	46.8	48 • 4	47.2	39.9	<b>3</b> 5•0	35•0	35.0
38	35∙0	35•6	36.4	41.8	44.2	41.2	35∙8	35•1	35•8	35•0
39	37.0	36 • 8	37.2	35.9	40.3	38 • 3	36.3	35•9	37.1	36 • 3
40	35.2	35.2	35.2	35.2	35∙8	35.7	35.0	35 • 1	35.0	35•∪
A	65.0	73 • 1	73.0	75.2	76.2	74.6	69.S	65.9	64.4	63 • 4
D	68.8	76 • 7	76.8	80.0	81 • 1	79•9	73.8	71 • 6	71.0	70 • 4
OASPL	70 • 9	75.8	77.0	81.4	83.2	81.9	74.8	74 • 4	74.0	73 • 4
PNL	76 • 4	82 • 8	83•7	8 <b>7.</b> 0	88•3	86.5	81.3	78•5	77.6	77 • 1
PNLT	76 • 4	84 • 8	85.2	87.0	88•3	86•5	81.3	78•5	78 • 8	<b>78 • 5</b>

LOWER LIMIT OF ANALYSIS SYSTEM= 35.0

#### NOISE LEVEL FREQUENCY SPECTRA TIME HISTORY

BELL 47 G

OCTOBER 5, 1976

EVENT 26, 60 MPH FLY BY, MIC . 150 METERS WEST

1/3 OCTAVE FREQUENCY BAND VS TIME (SECONDS)
(DB RE 20 MICRO PA)

BAND	-10-0	-5-0	C	3•0	5+0	10.0	15•0	20•0	25.0	28.0
17	59.2	64.6	65-2	63 • 2	59 • 8	54.4	53.5	55 • 7	53.7	53 • 3
18	61.7	65 • 8	65 • 4	66+3	67.4	67.1	64.0	62.0	59 • 6	56.6
19	66 • 4	69 • 4	71.4	69.8	66.8	61.0	59 • 8	60 • 1	58 • 0	56.9
20	57 • 3	59.4	55.8	59.6	55.6	56 • 4	53.9	55.3	55.8	57.6
21	54.5	55.7	59.3	57 • 4	55.2	66.2	66.5	68 • 8	70.0	71.4
22	62 • 6	53.9	64-1	62.6	56.3	60.5	59 - 1	60 • 7	61.2	62.5
23	50 • 0	55.9	69.2	74.8	74.5	59.6	65 • 7	63.9	62.4	55.9
24	53 • 9	65.4	73.6	70.8	67.5	55 • 7	52.2	52.7	61.1	66.6
25	55 • 4	64.6	61.3	66 - 1	68.0	65 • 0	54.0	51 • 4	59.3	65.1
26	62.5	62.7	68.9	68 • 1	63.3	66 • 4	61 • 2	52 - 1	56 • 7	63.4
27	57 • 2	58 • 6	68.0	68 • 4	67·8	64.2	63.7	56.5	50.9	57.0
28	51 • 8	62 • 7	67.8	66.1	63.2	59.9	61.5	59 • 3	53.9	53.6
29	59 • 1	60 • 6	64.7	63.9	66.8	64 • 4	53.6	59.0	56.0	58 • 6
30	55•8	60 • 7	64.2	63.3	62.9	60.0	57.8	53 • 5	54.2	58.5
31	57•0	60.0	64.2	66 • 1	62.5	64 • 3	58 • 9	54.9	49-1	55 • 1
32	51 + 9	57.0	61.7	61.3	61.2	60 • 4	54.7	51.9	46.4	45.3
33	48.0	56 • 5	60.8	61.6	60.6	58 • 4	51 + 6	46.9	45.5	43.2
34	48.2	54 • 4	60 • 4	61.5	58 • 7	57.4	51.7	47.7	41.3	42.4
35	45•0	51.7	58 • 6	59.1	56.0	52 • 3	45.2	42.2	35∙8	36.2
36	40 • 3	47 • 8	57.2	56•9	52 • 1	46.8	37.9	35 • 4	35.0	35.0
37	35 • 3	42.2	53 + 8	51.9	46.7	40.8	35.0	35.0	35.0	35.0
38	40 • 4	41 • 8	49.7	46.9	43 • 3	41.6	40.5	39.9	41 - 1	41.1
39	40 • 2	40 • 3	44.1	42.4	40 • 6	40 • 3	40 • 0	40 • 1	41.2	40.8
40	38•4	38 • 0	38•7	37.7	37.8	37.3	37.3	37.8	37.8	38.5
Α	64 . 8	69•3	74.4	74.5	73 • 0	71.0	66 • 9	64 • 6	62.9	66.7
D	69•0	73•7	79.4	80.0	78 • 1	75 • 2	71.2	69.5	69 • 6	72.1
OASPL	71 • 9	75•4	80.9	81.0	79•2	75 • Q	72•7	72.3	72.6	74.6
PNL	76 • 8	80•7	86.8	86.9	85.5	82.4	78 • 6	76.2	76 • 1	78.0
PNLT	78 • 6	82 • 1	86 • 8	88.2	86 • 5	83.8	79•7	77-3	76 • 6	78 • 6

LOWER LIMIT OF ANALYS'S SYSTEM= 35.0

### TABLE C-YE

#### NOISE LEVEL FREQUENCY SPECTRA TIME HISTORY

#### BELL 47 G

OCTOBER 5, 1976

EVENT 30, 75 MPH FLY BY, MIC. 150 METERS WEST

1/3 OCTAVE FREQUENCY BAND US TIME (SECONDS)
(DB RE 20 MICRO PA)

BAND	-9•û	-3.5	O	2+0	7 = 5	13+0	18.5	24.0	29.5	31.0
17	58.2	8.09	60 - 0	59 - 1	56 • 6	52.6	53 • 3	54.5	53 • 7	50.9
18	61.3	65.2	65 • 6	67 • 8	68 • 3	59.7	61.0	63.5	58 • 0	58 • 4
19	65 • 1	68 • 5	69.2	65 • 5	59.3	55.9	60.0	62.2	60 • 7	57 • 4
50	56.9	55•9	53 • 7	54 • 4	57 • 8	55•4	53 • 4	53.0	53.9	54.5
21	52.2	52 • 3	60 • 0	59.2	66.0	69.9	64.4	63.5	67.2	66.2
88	60 • 4	57 • 3	62.4	60 • 7	54.0	61.8	60.0	60.8	64.3	62.3
23	47.3	62.9	72.0	74.5	65.0	60.2	61 • 1	67.1	58 • 8	55 - 9
24	50.8	69.0	69 • 3	66.5	59 • 2	48 • 4	53 • 4	56.5	62.9	61 • 5
25	57.3	64.2	61.1	61.8	64.2	52 • 5	53 • 8	54 • 6	65.3	6.3 • 8
<b>8</b> 6	60.4	58 • 1	67.5	67.9	64.5	58 • 1	49 • 1	54 • Û	66.5	65 • 0
27	58.2	64.5	67.0	66 8	57.9	59 • 1	50 • 9	47.4	61.7	60+0
28	53 • 6	63 - 1	64.9	64.9	63.0	57.0	53 • 2	42.2	55 • 5	57.9
89	58 • 7	63 • 1	62.8	68.8	60 ∞ 6	53.2	56+3	51.2	55 • 3	55.9
30	54.9	61.3	62.4	61.6	61 • 8	57.4	54 • 4	55.4	54.9	54.3
31	56 • 5	60 • 8	61.6	62.0	59 • 8	56.0	50.5	57.4	54.5	52 • 1
32	51 • 8	58 • 4	60 • 0	59.8	57 - 1	52.8	52 • 5	52 • 1	49 • 8	46 • 1
33	48 - 1	56.2	58 • 5	58.9	55.9	48.2	46 • 9	48.2	48 • 6	43.0
34	48.2	55 • 6	58 • 3	59.2	54.3	46.3	44.7	47 • 1	46 • 1	39 • 5
35	43.7	51.7	56.9	57.6	51 • 4	38 • 1	36 • 5	40 • 0	37 • 1	35.0
36	39•5	48 • 3	54.5	55•6	46.9	35.0	35.0	35 • 6	35 • 0	35.0
37	35.0	43 • 3	51.0	52.0	40.5	35.0	35.0	35 *0	35.0	35.0
38	35.0	37.5	44.7	47.6	35.6	35.0	35.0	35.0	35.0	35•9
39	38 • 1	38.8	40 - 1	41.7	38.8	37.9	38 • 7	39 • 3	38 • 9	39•3
40	39.2	38 • 3	38.2	38•3	37.7	38•3	38 • 1	37.8	37.3	37-2
A	64.7	70.3	72.3	72.6	69 • 1	64 • 4	65.0	63 • 5	66 • 8	65•3
D	68.3	74.8	77 • 8	78 • 1	73 • 3	69 • 7	67.6	69.5	72.0	70 • 2
OASPL	71.0	75 • 6	79.0	79.9	74.4	72.3	69 • 9	71 • 7	73 • 7	71 • 9
PNL	75.6	81.8	84.6	85.6	80 • 6	76.4	73.9	76.3	79.0	76.6
PNLT	77.1	81.8	84.6	85•6	81.9	76.4	75.2	77.6	79.0	77 - 1

LOWER LIMIT OF ANALYSIS SYSTEM= 35.0

#### NOISE LEVEL FREQUENCY SPECTRA TIME HISTORY

BELL 47 G

OCTOBER 5. 1976

EVENT 31. 75 MPH FLY BY. MIC. 150 METERS WEST

1/3 OCTAVE FREQUENCY BAND VS TIME (SECONDS)
(DB RE 20 MICRO PA)

BAND	-9.5	-6.0	-2.5	0	1.0	4 • 0	4.5	8.0	11.5	15.0	18.0
17	64.4	63.7	61.9	61.6	61.5	60.5	60 • 8	60 • 4	55.8	54.7	53.3
18	63.9	65.0	63.5	65.9	66.5	69.0	8.36	67.3	63 • 3	58 • 1	59.1
19	71.0	72.8	72.7	73.5	73.7	71.2	70.2	63.7	57.5	56.0	58.3
20	57.9	57.6	56.4	54.3	54.5	53.9	53.8	53 . 7	53 • 6	55 • 7	59.2
ខរ	53.9	54.7	51.9	58.7	60.2	62 • 3	61.5	66.3	71.7	70.7	70.8
22	59 + 8	55.3	61.5	66.9	68 • 3	57.2	65 • 4	63.9	66+0	64.9	65+5
23	47.8	59.2	66.0	70.0	72.5	76.6	76 • 1	66.6	55.5	57.0	55.9
24	54.6	67.7	73.0	74.7	74.9	71.0	69.6	66.7	59 • 1	55.0	56.9
25	61.9	67.7	66.6	61 - 4	62 . 2	62.3	54.8	70 • 7	64.7	54.7	55.4
26	57.5	61.0	61.3	68.3	70 - 1	69.4	68 - 1	67.9	69.9	60 . 7	57.4
27	61.0	59.1	69.5	67.6	68.2	69.7	69.2	61.7	67.7	62.7	59.6
28	52.7	63 • 4	62.7	66.5	67.9	64.3	63 - 1	65.6	57.5	59 • 1	59.8
29	57.9	60.4	64.4	64.3	65.2	64+8	65.4	63.2	60.9	51.4	56.5
30	55.8	60.8	64.1	63.5	64.4	64.4	64.2	65.8	61.0	59.9	54.8
31	57 • 1	61.7	64 - 1	64.8	65 • 4	67.8	67.7	65+0	68.4	59.0	58.4
32	54.3	58.2	60.7	62.8	62 - 6	63 - 1	68.8	62.5	59 - 1	53.9	54.6
33	52.8	55.4	59.0	62.4	63 - 1	63.2	62.7	61.0	57.8	51.8	52.4
34	51.3	53.9	59.5	62.7	63 • 6	63.0	62-4	60 - 5	55.3	50.6	48.4
35	47.3	49.5	57.1	60.2	60.9	60.3	59.4	56 - 1	50.2	44.4	42.8
36	43.9	46,9	55.3	58.3	59 - 1	57.7	56.8	52.6	44.7	38.5	36.1
37	37.5	40.7	50 • 4	54.6	56.0	53.7	52.9	46.4	37.6	35.0	35.0
38	36.3	36.1	42.9	49.3	51.2	48 . 8	47.1	39.0	35.0	35 € 0	35.0
39	39.1	39.0	40.3	44.0	45.5	42.9	41.5	38.9	38.7	39.5	38.3
40	38.5	38.2	38.8	41.0	41.6	39.8	39.4	38.9	38.2	38 • 5	37.7
Α	65.5	69.8	73.1	74.5	75.3	75.9	75.5	73.4	71 - 4	66.6	66.0
D	70.7	74.0	78.2	80-1	81.0	81.3	80.6	78.2	75.7	71.8	71.5
OASPL	74.6	76.8	78.9	80.4	81.2	81.3	80.7	77.8	76.6	73.7	73.8
PNL	77.3	81.4	85.5	87.6	88.5	88.3	87.7	85.3	83.0	78 - 1	77.9
PNLT	78.5	82.6	85 • 5	87 • 6	88.5	89.6	89-1	86-4	83.0	79.7	79.1

NOISE LEVEL FREQUENCY SPECTRA TIME HISTORY

BELL 47 G

OCTOBER 5, 1976

EVENT 33, 75 MPH FLY BY, MIC. 150 METERS WEST

1/3 OCTAVE FREQUENCY BAND VS TIME (SECONDS)
(DB RE 20 MICRO PA)

BAND	-8.5	~5•0	-1.5	0	2.0	4.5	5 • 5	9.0	12.5	16.0	18.0
17	67.2	67.0	62.2	67.0	62 • 3	60 • 0	60 • 8	59 • 8	57.6	57.7	54.7
18	66.2	66.8	65+2	66 .2	66.0	67.2	67.7	67.0	64-1	63.3	60.6
19	73 • 6	74.3	75 • 4	75.7	75.5	74.4	73.9	68.2	64.4	61.4	60 • 4
20	64.1	62.7	62.5	60 • 4	58.9	59.0	57.8	55.7	57.6	61.8	61.2
21	60.0	56 • 3	60.7	59 • 4	59.6	59.5	57.6	62.2	68.0	69.7	69.5
28	64.2	59.7	65 • 4	67.8	67.8	67.6	63.9	64.9	68.7	68 - 1	67.1
23	38 • 1	60 • 6	66.6	67.7	70.0	75 - 1	75.0	66 • 5	58 • 0	60.6	60.2
24	58.2	70.3	73 • 4	75.4	76.5	75.8	73.7	63 • 1	61.9	55 • 7	57.8
25	63.4	68.5	64 • 6	62.9	63.6	64.3	66 • Û	69.6	66.3	57.8	57:4
26	61.5	59 • 6	67.3	70.9	70 • 1	68 • 5	67.4	69.8	71.5	64.9	58.7
2 <b>7</b>	61.4	63 • 1	68.3	68 • 1	68.5	71.2	69 - 8	61 • 4	70.0	68 • 1	64.4
28	55.9	65.7	64.8	68.0	67.4	64.8	65 • 8	66.9	59.0	64.9	63.0
29	60.3	62 • 4	64.0	65.8	64.1	67.7	68.5	64.2	63.8	56.8	58.0
30	57.9	61.3	63.6	66.2	65 • 4	66.4	66.7	66.2	62.9	57 • 4	53.2
31	58 • 1	61.3	65.9	67.0	66.9	69.6	69 • 1	64.8	64.5	58.6	57.6
32	54.6	58 • 8	62.0	64.2	64.6	65.6	65 • 4	63.7	61.6	54.8	55.3
33	52.9	55.9	8 • 00	64.2	64.1	63.9	64.0	62 • 1	60.0	52.2	53.0
34	51.6	55 • 6	59.7	63.7	64.9	64.2	63 • 1	59.6	59 • 6	50.9	49.3
35	47.9	52.6	57.5	62.3	61.7	61.1	59.5	55.6	54.8	44.9	44.5
36	42.9	49.3	55.8	61 • 1	59.9	58.2	57.2	52.1	49.2	39.5	39.5
37	36.4	44.7	50.5	55.9	57.2	53.7	53.2	46.4	41.9	35.0	35.0
38	35.0	38 • 4	45.0	50.5	51.8	47.8	46.5	38 • 4	35 • 4	35.0	35.0
39	38.4	38 • 4	41.8	45.5	46.0	43.3	41.9	38.9	38 • 8	38.9	38 • 4
40	38.7	38 • 1	38.5	40.5	41.0	39.9	39.4	38 • 3	39.3	38.3	38.8
Α	67.2	71 - 4	73.8	76.3	76.0	76.7	76.5	74.2	73.8	69.5	67.4
D	72 . 4	76.2	78.9	81 • 4	81.7	82.3	81.6	78 - 4	78 - 4	74.1	72.3
OASPL	76.9	79.0	80.3	81.7	81.5	82.5	81.7	78 - 1	77.9	75.8	74.4
PNL	79.0	83.2	86.5	88.9	89.3	89.2	88.4	85 • 3	85.2	81.2	79.2
PNLT	80 - 1	84.2	87.5	88.9	89.3	90.4	89.4	86.6	85.2	81.2	80 • 3
							•				

LOWER LIMIT OF ANALYSIS SYSTEM= 35.0

#### NOISE LEVEL FREQUENCY SPECTRA TIME HISTORY

BELL 47 G

OCTOBER 5, 1976

EVENT 36, 82 MPH FLY BY, MIC. 150 METERS WEST

1/3 OCTAVE FREQUENCY BAND VS TIME (SECONDS)
(DB RE 20 MICRO PA)

BAND	-8•0	-3.5	0	1-0	5 • 5	10.0	14=5	19-0	23.5	26•0
17	65.0	64.4	64.9	60 • 7	59 - 1	57.7	57.0	57.7	52.9	53 • 2
18	64-4	65.8	65.8	66.9	68.7	65.8	61.8	59.5	58 • 4	61.0
19	71 • 1	73.6	73.2	73.2	67.1	59 • 1	55 • 4	54.2	54 • i	53 • 5
20	58 • 1	57.3	53 • 7	52.7	51.0	51 • 3	53 • 3	51 • 4	51.6	50.2
21	53 • 2	50 • 3	60.6	62.3	61.7	68.3	70.2	69.5	71 • 1	68 • 8
88	61.0	60 - 1	6B•0	68.8	62.4	62.2	62.6	61 • 6	61.7	60 • 1
23	47.9	63.2	70.0	72.2	75 - 6	58.0	51.3	60•0	57•3	64.5
24	58 • 9	72.2	75.4	74.7	67.3	67.0	53 • 4	55.4	63 • 1	60.5
25	63 • 6	68 • 6	60 • 7	61.2	65 • 7	68 • 3	60 - 4	51 • 7	56 • 8	58.0
26	59•2	58 3	69•9	70 • 1	66 • 7	67.6	65 • 8	60.9	56 • 4	52 • 6
27	6Û • 8	67-1	67.1	66.3	67•9	64.2	62.7	65•0	58 • 2	57 • 3
28	55 • 1	64.7	67 • 8	67.9	62.6	63 • 1	56 • 3	64.2	62.5	61.8
29	60 • 7	64.3	65.7	65+3	66 • 3	63 • 1	58 • 1	63.0	66 • 4	65•7
30	58 • 0	62.6	63 • 3	63•7	64.5	64.0	61.2	59 • 5	61.2	64.3
31	8 • 00	64.0	64.8	65.8	65•9	63.2	56 • 1	62 • 3	58 • 8	59.9
32	57 • 1	60.5	63 • 1	63.5	61 • 6	62 • 3	58 • 3	54.2	60 • 9	59•0
33	54 • 4	58 • 4	62.9	63 • 1	61 • 1	60 • 1	54 • 1	55.2	52 • 1	57•3
34	51 • 8	57.8	63.0	63 • 8	60 • 4	57.5	50 • 2	54.4	48.5	50.0
35	47.7	53•8	60 • 9	61.0	56.6	53 • 8	45.1	44.9	40.9	44.4
36	42.9	50.7	57.9	58.9	54.0	49.2	38 • 7	37.8	35-1	36.0
3′	36 • 8	46.5	54.2	55•6	50 • 1	43.0	35.0	35.0	35.0	35.0
38	35 ∙0	40.3	49.3	50.2	44.4	36.3	35.0	35.0	35•0	35.0
39	39•6	39.7	44.8	45.3	40 • 4	39.0	40.0	39•9	40 • 1	39.8
40	40 • 9	40 - 1	41.8	41.5	40.7	40 • 1	40.2	42 = 0	42.2	42.2
A	67 • 4	78•6	74.9	75.4	74 - 1	72.3	68 • 1	69•6	70•0	70.2
D	72.0	77 • 4	80 • 9	81.3	79 • 2	77.0	72.5	73 • 3	73.2	73.6
OASPL	74.8	79.1	81.2	81.2	79 - 4	76 • 6	73.5	74 - 1	74 • 4	74 • 4
PNL	78 • 7	84.5	88 • 1	88 • 5	86.6	83.6	79•5	79.8	80 - 1	80.0
PNLT	80 • 1	84.5	88 • 1	88.5	86.6	83.6	80.8	81 • 6	81.9	80 • 0

NOISE LEVEL FREQUENCY SPECTRA TIME HISTORY

BELL 47 G

OCTOBER 5, 1976

EVENT 41. 9 DEGREE APPROACH. MIC. 150 METERS WEST

1/3 OCTAVE FREQUENCY BAND VS TIME (SECONDS)
(DB RE 20 MICRO PA)

BAND	-23.0	-17.5	-12.0	-6.5	-1.0	0	4•Û	4 • 5	10.0	15-5	16.5
17	53.9	54.2	56.9	61.2	62 • 1	61 • 7	63.9	63 • 3	59+1	53 - 1	52 • 2
18	56 • 4	61-4	59.5	65.7	63.0	62.8	64.9	65 • 4	66+9	61.9	62 • 1
19	60.2	62.0	61.6	64.7	66.1	65 • 3	66 • 4	66.4	63+9	58 • 7	57 • 4
20	58 • 4	60 • 5	57.3	55.3	56.4	53 • 8	56.3	56.1	60.7	55.2	55•6
21	60 • 7	64 - 3	58 • 8	53.3	57.0	57.0	54.8	54.8	64.3	65 • 7	65.0
55	62.2	67.0	59.5	57.6	65 • 4	64.2	61.0	60 • 3	61.7	60 • 0	58 • 4
23	56.7	64.3	56.9	56.2	67.6	67.4	70 • 6	70.9	59.5	65 • 7	65•7
24	48.7	58 • 5	58.9	64.9	73.5	72.8	70.9	70.2	57.1	55.4	56.0
25	57.9	63 • 6	58 • 8	63.8	63.2	61.0	65.8	66 • 6	64.5	54.0	55.4
26	62.7	69+3	61.5	57.8	66.8	66.9	59.5	59 • 0	66.8	50.2	53 • 6
27	60.7	67.6	53 • 1	59 • 3	68 • 1	67.6	64.3	64 • 4	64 • 4	50 • 4	47.1
28	52.9	56 • 6	55 • 0	58 • 5	64.4	63.3	61.3	61.2	56 • 1	54.9	54.0
29	47.2	55.0	52.9	57.3	61.9	61 • 4	61.5	61.7	59 • 4	54 • 1	55.5
30	45.7	51 • 1	52.3	54.6	63 • 1	62.0	61.6	68•0	57.4	50•6	53 • 8
31	48.9	56.0	53 • 5	55 • 5	61.0	62.5	64.9	64 • 8	57.4	45•7	48.1
32	46.2		50 • 5	53.7	58 • 7	38 • 3	59.5	59 • 5	55•2	48 • 6	49.5
33	39.9			52.5	56.5	56 • 6	57.5	57•5	53 • 3	43 • 3	48.0
34	78 • 4			51.9	55.7	56 • 1	58 • 0	57∘6	53 • 3	42.9	44.3
35	32.2			47.5	53.3	53 . 3	56 • 3	55 • 5	48 • 7	37.5	38.0
36	30 • 4	- ·-		44.0	50.3	50 • 4	53.5	52.8	44.5	35.0	35.2
37	30.4			37.8	44.4	44.6	47.4	46 • 5	37.6	35.0	35.0
38	30 • 4			35.2	37.9	38 • 4	41 - 1	40 • 8	35.2	35•0	35.0
39	33.9			39.3	39 • 4	38.9	40.0	39 • 8	39•5	37.7	37 • 7
40	30 • 4			35.0	35.0	35.0	35.0	35.0	35.0	35.0	35•0
A	63 • 2			66.0	72.5	72.0	71.9	71.9	67.8	61.6	62.2
D	68 • 4	=		71 - 1	77.1	76 • 6	76.9	77.0	72.8	68.0	68 • 1
OASPL				72.7	79 • 1	79.0	78.9	78 • 8	74.6	70 • 8	70 • 8
PNL	74.7			77.9	84.6	84.2	83.6	83.5	80.7	74.8	75.2
PNLT	75.2			78 • 6	84.6	84.2	85.2	84.9	81 • 4	76.2	75.2

## TABLE C-III

#### NOISE LEVEL FREQUENCY SPECTRA TIME HISTORY

BELL 47 G

OCTOBER 5, 1976

EVENT 19, 6 DEGREE APPROACH, MIC. 150 METERS EAST

1/3 OCTAVE FREQUENCY BAND VS TIME (SECONDS)
(DB RE 20 MICRU PA)

BAND	-13.0	-8.5	-4.0	o	<b>+</b> 5	<b>j•</b> 0	9.5	14.0	18•5	21.0
17	61.2	62.5	64.0	62.5	61.7	60 • 3	55 • 4	57 • 1	56.0	55 • 8
18	59.5	60 • 7	61.9	64.2	64•4	64.8	59.2	59.6	57-4	57•6
19	64-3	64.0	66.8	67.2	67.4	65.1	60 • 4	58 • 1	57.6	57•7
20	57 • 4	59.6	60 - 1	60 • 9	61.3	58.3	58.5	59.5	58 • 2	56.5
21	55.7	56 • 4	56 • 1	56.9	57.3	61.2	66 • 4	69.0	68 • 7	68 • 8
22	57.7	56.2	57.0	67.6	68.2	61.4	65.7	64.6	63.0	62 • 7
23	51.6	52.8	60.2	69.3	70.3	68.3	62.2	62.6	62.2	61.1
24	55+5	61.0	70.7	74.4	75.0	65.0	58.3	60.8	61.6	60.9
25	56.2	58 • 1	64.5	64·5	65.3	64.9	53.3	55.0	57 • 4	57.3
26	60.5	60.7	60.2	63.3	63.9	63.3	57.9	56.9	58 • 3	58 • 1
27	60.8	56.9	61 - 1	66∙4	68 • 6	57.3	57.7	52.5	53.5	55.8
28	53.4	54.4	62.2	62.7	62.6	62.3	57.8	53 • 4	51 • 1	53.9
29	57.6	58 • 3	59.9	63.9	63.8	57.7	53.3	52.3	46.4	50.0
30	56∙ গ	56.6	60 • i	62.9	63.3	59 • 6	53.9	51.3	46.5	47.7
31	56.3	56.0	61.2	61 • 1	62.1	60.2	59.8	47.6	50.3	49.8
32	52.0	53.8	58.5	59.8	60.2	55.3	48.7	42.6	47.2	42.8
33	47.4	50 • 8	54.8	58 • 3	58.5	55.8	50 • 1	40 • 1	45 • 4	42.9
34	45.8	46.2	52.8	57.5	58 • 1	56.2	50.2	38.0	39.3	43.5
35	41.5	42.0	49.4	54.9	54.8	53 • 4	45.8	35.4	40 • 3	37.0
36	35+5	37.3	45.2	52.0	52.3	50 • 1	42.1	35.0	35 • 1	35.0
37	35.0	35.0	40 • 1	47.1	47.8	45 • 4	36.3	35.0	35.0	35.0
38	35.0	35.0	35.1	42.2	42.7	39.7	35.0	35.0	35.0	35.0
39	35.0	35.0	35.0	37.9	38.2	35.0	35.0	35+0	35.0	35.0
40	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35+0
A	64.9	64.7	69.3	72.6	73.2	69 • 1	65.2	62.4	61 • 7	62.0
D	78.4	79.1	84.3	87 • 7	88 • 3	84.4	80.2	78.5	78 • 6	78 • 3
OASPL		72.6	76.6	78.7	79.2	75 • 4	72.9	72.7	72.2	71.9
PNL	75.7	76.2	81.7	85.6	86 • 1	81.6	77.2	74.9	75.0	75.0
PNLT	75.7	76.2	81.7	85.6	86.1	83.2	79.8	74.9	76 - 1	76.5

NOISE LEVEL FREQUENCY SPECTRA TIME HISTORY

BELL 47 G

OCTOBER 5. 1976

EVENT 26. 60 MPH FLY BY, MIC. 150 METERS EAST

1/3 OCTAVE FREQUENCY BAND VS TIME (SECONDS)
(DB RE 20 MICRO PA)

BAND	-10.0	-6•0	-2.0	0	8•0	6.0	10.0	14.0	18.0
17	62 • 4	65.5	63 • 4	61.4	63.5	60.9	59.5	54.5	55 • 0
18	61 • 4	64.3	63 • 4	63.7	66 • 6	67.5	66.4	62.8	60 • 3
19	69.6	71.3	71.8	71.4	71.8	67.6	63.0	58 • 2	59.3
so	59.5	60 • 4	59.8	56.7	58 • 4	57·1	56 • 3	55•9	55•2
21	54.8	54.0	54.5	56.8	57.3	54.3	65•3	68•2	68 • 5
22	58.2	56.0	61.9	64.6	65.0	54•7	59 • 8	61 • 7	60 • 5
23	47.8	53.5	64.7	67.3	71 - 7	72.6	52.7	59.9	61 • 8
24	51.4	63.6	73.0	72.7	71 • 4	65.3	56.2	51 • 1	55 • 6
25	60.0	64.0	65.0	61.6	62 • 4	65•8	62.0	50 • 9	51 • 1
26	56.0	60.2	60.2	64 • 1	65 • 3	65 • 4	64.9	59 - 8	51 - 4
27	58 • 8	54.9	68 • 3	67.7	67.9	65•6	59.6	61 • 1	56 • 9
28	51.8	59.7	62.7	63 • 5	63 • 2	65 • 1	54.6	59.2	59 • 9
29	56 • 8	59.6	64+6	62.9	62.2	63+3	60 + 8	54.0	58 • 7
30	54.6	57.8	62.8	61 • 4	61.2	61.7	55 • 5	58.3	50.0
31	56.3	58.3	64.4	61 • 1	62.7	63.2	60 • 4	58 • 2	55.9
32	54 - 1	55 • 4	60.0	59 • 7	61 • 3	60.2	56.2	51.2	53 • 1
33	51 • 1	52.2	58 • 1	60 • 3	62 • 3	59.7	56.2	48 • 4	48 • 8
34	49.9	51.6	58 • 4	61 • 4	63 • 1	59.3	55.4	46 - 1	47.2
35	45 - 4	49.3	54.9	58 • 2	60 • 5	56-1	50+2	41.7	42.3
36	40.8	45.7	53.3	56•3	57 • 8	53.1	46.3	37.3	36.2
37	35.6	39.8	48.0	52.7	54 • 1	48.3	40.7	35.0	35+0
38	35.0	35.7	42.4	46 • 7	48 • 4	43.0	35.0	35+0	35.0
39	35.0	35.0	36.6	41 • 1	41 • 4	36 • 1	35.0	35.0	35.0
40	35.0	35.0	35.0	35•0	35 • 0	35.0	35.0	35.0	35.0
A	64.6	67 • 4	72.8	72.6	73.5	72.3	68 • 1	65.5	64•7 79•3
$\boldsymbol{q}$	79 • 4	85 • 1	87 • 7	88 • 1	89.6	87.5	82.9	79.7	71.9
OASP	L 73 · 1	75.9	78.4	78 • 2	79.0	78.0	73.6	72.3	75.9
PNL		78.6	84.9	85•7	87.0	84-4	79.9	76.5	
PNLT	77 • 1	78.6	85•9	85 • 7	87.0	84-4	81.8	77.5	77•4

# THOLE C-VI

#### NOISE LEVEL FREQUENCY SPECTRA TIME HISTORY

BELL 47 G

OCTOBER 5, 1976

EVENT 30. 75 MPH FLY BY. MIC. 150 METERS EAST

1/3 OCTAVE FREQUENCY BAND VS TIME (SECONDS)
(DB RE 20 MICRO PA)

BAND	-6.5	-8.0	o	• 5	2.5	7.0	11.5	16.0	20.5	25.0	25•5
17	62.7	60 • 4	59 - 4	58 • <b>7</b>	56•5	57•9	55 • 1	47.1	53 • 4	54.3	54.1
18	61.5	63 • 1	65.3	66.3	68 • 6	69-1	68.2	62.2	65.2	64.8	64.1
19	66.5	69.5	69.2	69.1	65.8	60.5	59 • 1	60.2	67.4	66 • 6	65 • 8
50	56 • 5	53 • 5	52.3	52.3	53 • 1	57.0	55.6	48.5	53.5	53.8	53.3
21	53.3	53.5	56.8	58.2	61.3	65.2	69.2	57•7	58 • 4	58 • 8	59.0
22	56.7	59.9	62.7	62.4	60.7	54.1	59 • 1	53.8	58 • 5	60.3	60.2
23	50 • 5	66.3	72.1	73.1	74.7	66.3	65.1	60.3	66.2	67.5	67.7
24	57.4	70.2	69.7	68.8	65 • 8	62.3	50.8	50.2	59.3	60.8	60 • 6
25	59 • 1	61.4	59.9	59•6	58 • 0	64.6	57.8	42 - 1	54• <b>7</b>	57.5	56•4
26	57.9	60 • 4	66 • 9	66 • 8	65•7	66 • 1	65.0	49.6	51.9	56 • 5	55 • 5
27	56.3	67.5	68•8	68.3	67 • 4	59.2	65.9	54.3	51.3	53 • 4	51 - 1
28	52•5	61 • 1	64.3	64.7	62.8	61.9	60.5	4	58 • 4	55.2	53.3
29	56.9	62.1	63 • 1	63.3	61 • 8	59.2	55 • 1	53.6	61.1	53.2	52.9
30	53•6	61 • 6	63.0	62•9	61.3	61.2	61.1	51.0	59•5	53.3	53 • 2
31	54 • 1	62 • 3	63.5	63 • 4	62.0	59.8	57.4	57.0	52.3	52.8	52.7
32	51.7	58 • 4	61 • 6	61.7	59.0	57.3	58.6	49.6	55•9	50•0	49.3
33	49.4	57.7	61 • 3	61.9	59.4	56•8	56.5	47.9	51.5	48.8	48 • 1
34	49.2	57.8	61.3	62.5	60.7	56 • 5	54 • 1	44.9	49.3	46.6	45 • 6
35	44.9	54 • 1	58•6	60 • 1	59 • 4	54.2	51.6	38 • 6	41.0	39.5	39.2
36	41.6	5Q • 8	56•5	57∙8	57.3	50 • 6	45.0	35•1	35•6	35.5	35•4
37	36 • 3	46 • 4	51.9	53.5	52 • 1	44.1	36.8	35.0	35.0	35.0	35.0
38	35.0	39.7	45 • 4	47.3	47.0	37.4	35.0	35.0	35•0	35.0	35.0
39	35.0	35.8	41 • 1	43.2	40.5	35•0	35.0	35.0	35.0	35.0	35.0
40	35.0	35.0	35 • 1	36 • 4	35.0	35.0	35.0	35.0	35•0	35.0	35.0
A	63.3	70 • 9	73.2	73 • 6	72.6	69 • 4	68 • 8	61.9	66•5	64 • 1	63.5
D	68 • 5	76 • 0	78 • 7	79.5	78.7	74 • 9	73.9	66∙2	70•7	70 • 1	69•7
OASPL	71.7	76 • 4	78 • 8	79.2	76 ∙5	75 • 1	74.7	<b>68</b> • €	72.8	73.0	72.6
PNL	75 • 3	82.9	86.0	86.7	85.7	81.8	80.7	73 • 5	77.1	76.9	76.6
PNLT	76.6	82.9	86•0	86•7	85•7	81.8	82.3	75•7	<b>7</b> 8•5	76.9	76.6

#### NOISE LEVEL FREQUENCY SPECTRA TIME HISTORY

BELL 47 G

OCTOBER 5, 1976

EVENT 31, 75 MPH FLY BY, MIC. 150 METERS EAST

1/3 OCTAVE FREQUENCY BAND VS TIME (SECONDS)
(DB RE 20 MICRO PA)

BAND	-9•0	~5•0	-1.0	o	3.0	5.0	7.0	11.0	15.0	19.0	55.0
17	59.6	61 • 8	62.6	62.3	63 - 1	60 • 4	58 • 5	54 • 1	52 • 6	54.7	52.3
ie	59.0	65.0	64.9	63.4	65.9	67.4	67.9	67.2	68 • 2	64.9	62.9
19	65 • 8	69 • 1	71 - 1	71.1	71.2	69 - 8	68 • 8	65.9	66 • 1	61 - 1	58.9
80	57.0	57 • 7	54 • 4	52.5	53.9	54.4	54.3	52 • 6	54.0	52.3	53.3
21	53 • 2	50.9	53.2	53 • 4	51.1	52.0	58.2	58 • 4	62 • 8	62.3	62.9
22	57.7	49.8	57.4	57 • 4	56.0	53 • 4	53.5	55.7	60 • 8	58.9	59.5
23	48.5	58 • 3	67.8	68.9	72.5	71 • 8	67.6	58.0	65 • 7	64.0	67.1
24	53.2	66.9	72.8	72.3	70.3	68 • 6	64.9	57.8	55 • 5	52 - 6	54.5
25	58.0	64.5	66.0	67.2	69.9	69.7	68 - 7	65 • 5	60 • 4	51.9	47.7
26	6i•i	64.6	62 • 1	64-1	63.6	66 - 1	69 - 7	70 • 3	67.9	60 • 1	57 • 7
27	57.1	58.7	68.8	69.1	67.6	64.9	62 - 1	66 • 1	67 • 4	62.6	63.6
28	51.5	63.9	63.1	63.2	64.3	68 • 4	65 • 9	59 • 3	63.6	59.3	61.8
29	57 • 1	60 • 3	65.4	66.0	65 • 8	65.4	62.7	65.8	59.0	56 • 1	59.5
30	52.9	61.9	63 • 4	63.8	65.7	64.4	65.7	61 • 4	64.2	58 • 3	56 • 6
31	54 • 4	61.5	63.8	64.6	63.5	66 • 1	62.8	63 • 4	61.5	61 • 1	58 • 1
32	53.2	59.2	60.6	62.6	62 • 1	64.9	61.6	61 • 1	61.6	59 - 1	50 • <b>7</b>
33	50 • 6	57 • 8	58•9	61.5	61.4	63.0	59•9	58 • 1	59.8	60.2	50 • 7
34	49.7	55 • 8	59.8	62 • 1	61 • 5	62.8	58•5	55 + 8	55•5	58 • 1	48.2
35	43.7	52 • 8	57.8	59.9	59.0	59.5	54.6	52 • 3	50 • 3	52.8	42.7
36	40.7	49.6	56 • 7	57.9	56•5	56 • 6	51.9	46 • 9	46 • 2	46 • 8	38 • 4
37	36 • 1	44 • 1	51.8	53.5	51.5	51.3	46.2	43.2	39.9	37.8	35.0
38	35.0	38 • 4	45 • 6	47.6	45.2	44.0	39 • 4	35•7	35.0	35.0	35.0
39	35.0	35.0	39.9	40 • 8	38 • 5	36.9	35.0	35.0	35.0	35.0	35.0
40	35+0	35.0	35.1	35.1	35•9	35•0	35•0	35.0	35.0	35.0	35•0
A	63.9	70 • 1	73.2	74.3	74.0	74 • 7	73 • 3	71.9	71.5	68.8	66.9
D	68 • 4	74 • 8	78 • 6	79.5	79 • 5	79 • 8	77 • 6	76 • 1	75 • რ	73 • 8	71.0
OASPL	71.0	75.2	79.5	79.9	80 • 4	79 - 7	77.9	76 - 1	76.2	72.6	72 • 4
PNL	75.8	81 • 5	85.5	86.7	86 • 4	87.0	84.5	83.4	82.6	81.2	77.8
PNLT	77•5	82.9	85.5	86.7	86 • 4	88 - 1	85.7	65.2	83.9	81.2	79•3

NOISE LEVEL FREQUENCY SPECTRA TIME HISTORY
BELL 47 G

OCTOBER 5, 1976

EVENT 33. 75 MPH FLY BY, MIC. 150 METERS EAST

1/3 OCTAVE FREQUENCY BAND VS TIME (SECONDS)
(DB RE 20 MICRO PA)

BAND	-8•0	-4.0	0	4.0	8.0	12.0	16.0	20=0	21+0
17	54.4	63 • 1	65•5	66•6	62.2	56 • 1	55•9	E / 0	
18	62.9	63 - 1	66.9	66.3	66.3	66+3	64.5	54.2	55 • 5
19	67.2	70.7	71.5	73.4	70.3	69.1	64.5	64.3	
20	62.6	59 • 1	65.5	63 • 5	64.2	60 • 0	57.7	63.3	62.0
18	57.3	59.2	64.0	62.9	63 • 1	62.4	63.4	58.1	57.0
22	58.9	56.9	65.3	64.5	62.1	64.2		66.9	66 • 7
23	59.2	61.0	68 • 4	71.3	66.7	56 • 4	63.2	65.0	64.4
24	55.6	69.9	74.3	73.9	64.3	56 • 8	64-1	70.3	68 • 2
25	59.3	65 • 4	66.9	71.4	68.9	65.3	56 • 1	60.2	58 • 0
26	63.3	66.3	64.3	65.5	70.9		54.7	51.2	50 • 7
27	58.7	62.0	70 • 6	68 • 3		70 • 7	62.5	56.5	53 • 3
28	51.8	66.4	64 • 0	68.2	62.5	69.3	66.9	61.0	58 • 7
29	58.9	63.5	66 • 5	68 • 2	64.7	62.2	63.1	56.7	56.3
30	55.5	63.8	63.5		64.0	65.7	58.0	57.5	58 • 7
31	56 • 1	62.3		65.9	66 • 1	65 • 8	63.3	55.8	54 • 4
32	54.5		64 • 6	66.0	63.6	64.8	64.8	59.0	57.8
33	53.5	60 • 3	62 • 4	65 • 4	63.3	64 • 1	62.8	55.8	54.3
34		58 • 7	61 • 5	65 • 5	62.4	62.3	60.9	55.5	54.1
	51.7	57.2	62.5	64.5	59.9	59.4	58 <b>· 7</b>	50.9	49.7
35	47.5	54.2	59 • 4	61.2	57.7	54.6	54.1	46.0	45.2
36	43.6	50 • 8	57.4	58•2	53•8	49.6	48.9	40.0	39.2
37	38.8	45.7	51.9	54.0	47.6	42.7	40.4	35.0	35.0
38	35.0	41.0	45 • 8	47.5	39.9	36.0	35.0	35.0	35.0
39	35.0	35.1	39 • 4	39.7	35•3	35.0	35.0	35.0	35.0
40	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0
A	66 • 3	72.4	74.4	76.5	73.7	74.0	71.4	67.4	66 • 1
D	71.5	76 • 6	80 • 2	82.0	78.6	78.0	75.8	73 • 1	71.6
OASPL	73 • 3	77.3	81 • 1	81.8	78.5	77.5	75.2	74.9	73.7
PNL	78.2	83 • 4	87.4	89.1	85.8	85.0	83.0	80.1	78.5
PNLT	80.0	84.6	87.4	89.1	85.8	85.0	83.0	81.2	79 • 7
								~	1 7 7 1

NOISE LEVEL FREQUENCY SPECTRA TIME HISTORY

BELL 47 G

OCTOBER 5, 1976

EVENT 36, 82 MPH FLY BY, MIC. 150 METERS EAST

1/3 OCTAVE FREQUENCY BAND VS TIME (SECONDS)
(DB RE 20 MICRO PA)

BAND	-10.0	-6.0	-2.0	0	2.0	2.5	6•0	10.0	14.0	18.0	20.5
17	63+4	63.7	61 • 4	62.5	63.9	63.4	60-3	59.7	59 - 7	65+4	57+9
18	64.9	66 • 4	66.9	65 • 6	67.2	67.7	69.2	70.0	69.0	66.3	65.2
19	66 • 8	68 • 3	71.5	71.0	71.6	71.9	68.6	66.0	63.3	62.7	61.0
20	58 • 8	56.9	56+5	53 • 7	54.3	54.2	52.0	53.0	52.3	52 • 3	54 • 1
21	54.5	52.5	50 <b>•9</b>	56.0	54.8	54.5	52.7	60 • 5	61.6	61.8	63•6
22	59 . 7	52.0	56 • 3	59 • 2	60 • 3	60 • 6	53.2	55.3	55.7	56 • 5	5 <b>7 •</b> 5
23	50 • 1	50.3	64.7	67.9	71 • 8	73.3	71.9	62.9	58•8	64 • 6	66•2
24	51.5	62.5	72.8	72.9	71 • 6	71.8	67.4	61.6	51.7	53 • 0	53 • 7
25	52.6	64.2	66 • 1	66•0	68 • 1	69•5	69.5	67.8	60 • 4	51.2	47•6
26	61.3	67 • 1	61.6	64 • 8	66•6	67.6	67.8	70 • 3	65.2	59•6	54.0
27	61.3	58•3	68 • 2	70.2	69•4	70.0	66 • 1	62.6	65•5	62.5	59•3
28	59.1	60 • 1	65 • 4	64.7	64 • 4	65•2	66.8	62.0	59 • 6	59.6	57•2
29	54.3	63.2	66 • 5	66•0	66.0	66.6	65.8	66•6	60•6	57.2	57•2
30	60 • 4	60.9	65•0	65•3	63•ხ	65.2	64.5	64.3	63.2	57•6	50.5
31	57.4	60.1	65•7	65•9	65•8	67.5	67.1	65.0	60 • 8	61.0	55•8
32	56.2	58.2	61.8	62 • 8	62 • <b>5</b>	64 • 1	64 • 1	63.5	62.0	56.8	52•3
33	53.5	56 - 1	60.0	62.6	61.5	63.5	62.9	61.6	58 • <b>9</b>	56•5	52.2
34	50 • 1	55 • 8	59•7	62.0	61.3	63•3	62.8	59 • 1	55•8	53•0	47.1
35	47.7	53 • 6	56 • 6	59•6	58•8	61.3	58.6	54.5	49.3	48 • 7	41.9
36	41.9	48.7	53 • 5	58•1	57•5	58 <b>• 7</b>	55.4	51.3	45 • 6	42.9	37-1
37	36.2	42.7	48 • 6	53 • 1	53 • 5	54•6	50 • 2	45.2	39•2	35•1	35.0
38	35.0	36.6	41.8	46 • 1	47.2	49.1	43.2	36.7	35•0	35•0	35.0
39	35.0	35.0	36 • 3	40 • 8	40.2	41.4	35.5	35.0	35.0	35.0	35.0
40	35.0	35.0	35.0	35.0	35.0	35•0	35.0	35.0	35.0	35.0	35.0
Α	66 • 7	69.8	73.8	74.8	74.6	75 • 9	75.1	73 • 4	70 • 6	67.6	64.2
D	70.5	74.3	78.0	79.6	79•5	81.2	80.0	77•8	75.0	72 • 3	69 • 6
QASPL	. 72.8	75.0	79.0	79.8	80 •8	81.5	79.6	77.6	74.7	72.8	71.9
PNL	77•5	81 • 4	85 • 4	86•9	86.7	88.2	86•9	84.6	81.6	79 • 1	76.5
PNLT	79•0	61 • 4	85•4	86•9	86•7	88.2	86.9	85•8	81.6	80.3	78 • 0

NOISE LEVEL FREQUENCY SPECTRA TIME HISTORY
BELL 47 G

OCTOBER 5, 1976

EVENT 41, 9 DEGREE APPROACH, MIC. 150 METERS EAST

1/3 OCTAVE FREQUENCY BAND VS TIME (SECONDS)
(DB RE 20 MICRO PA)

BAND	-19.5	-15.0	-10.5	-6.0	-1 -5	0	3.0	7•5	12.0	13=0
17	60.2	59•0	62.6	66 • 2	61 • 2	63.3	60.0	<i>.</i>		
18	60.6	60.8	60.8	63.0	66.2	66.8	62.9	61-4	58.9	55•6
19	62.5	66.0	64.4	66.8	66+3	65 • 1	63 • 2	64.8	60.2	60•5
20	62.2	59.4	59.1	57.9	57.6	55.9	65.9	65 • 5	58 • 4	58 • 9
21	64.3	59.0	58.5	55 • 1	65.9	65.9	54.3	56.5	56.5	56.2
22	63.9	56.5	58.6	61.6	70 • 9	72.1	63.5	59 • 7	68.2	68•3
23	59.0	51.0	55.2	62.0	69.8		71 • 5	56.9	64.5	63•5
24	58.3	56.9	62.0	69.6	74 • 1	70 • 3	71.5	66 • B	60.6	60.9
25	59.7	59.8	59.9	61 • 1	63.4	73 • 4	70.7	62•6	52.8	53.3
26	61.2	58.3	58.5	59.3		64.3	57.6	65.7	52 • 7	49.2
27	57.9	51.5	51.8	64.8	69 • 8	70 • 4	66 • 1	61.3	59 • 3	55.7
28	50 • 5	54.2	57.6		63 - 8	63.5	61 • 1	56.9	59.0	56.9
29	55.5	54.6	52.3	58 • 4	65 - 1	63.7	60•9	59 • 4	57.9	57.8
30	49.7	51.0	54.5	59.5	64 • 5	63 • 1	61.0	56 • 1	51.8	53.8
31	49.2	49.9	53.2	58 • 1	62.5	65.8	61 • 4	57.8	58 • 4	52.2
32	43 • 1	47.2	50 • 6	56 • 1	63 • 4	65.0	61.2	59 • 8	57.3	55.6
33	41.9	45.8		54.3	59 • 8	60.5	58 • 1	54.5	52.6	49.1
34	39.2		49.7	53.5	57.6	57.4	58 • 8	53 • 1	51.3	49.6
35	36.3	44.2	48 • 6	52 • 3	57+4	57.7	59∙8	52.2	50.7	48.0
36	35.0	40 • 8	45.1	48 • 4	54.1	55 • 4	57.3	49.4	46.9	43.8
37		36.5	40.5	45.5	52 • 1	52 • 1	54.7	46.9	42.1	39.2
38	35.0	35.0	35.0	40.0	48 • 0	48.3	50.3	41.7	36.5	35.3
39	35.0	35.0	35.0	35.0	42.0	42.7	44.3	35.9	35.0	35.0
40	35.0	35.0	35.0	35.0	36 • 1	38 • 1	37.8	35.0	35.0	35.0
	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35+0	35.0	35.0
A	62.9	61.9	63.9	68•0	73.1	73 • 3	71 • 6	67.7	65.5	63.8
D OASDI	68 • 4	67.0	68 • 6	73.2	78 • 6	78 • €	77.8	73.0	70.9	69.6
OASPL	72.2	71 - 1	72.2	75.9	79.7	79.5	78 • 3	75.0	72.9	
PNL	75 - 3	74.0	75.6	80.7	85.9	85.8	84.6	79+6	77.0	72 • 1
PNLT	77 • 1	74.0	77 • 4	80 • 7	85.9	86.9	84.6	80.8	78.3	75 • 8
								20 W G	10+2	77.4

# TABLE C-JIL

#### NOISE LEVEL FREQUENCY SPECTRA TIME HISTORY

BELL 47 G

OCTOBER 5, 1976

### EVENT 19, 6 DEGREE APPROACH, CENTERLINE MIC. ( SOFT SITE )

# 1/3 OCTAVE FREQUENCY BAND VS TIME (SECONDS) (DB RE 20 MICRO PA)

BAND	-9.5	-7.0	-4.5	-2.0	0	• 5	3•0	5•5	8•0	8•5
17	60 - 1	65.2	67.6	68.0	64+8	63.5	60 • 7	56•3	58 • 1	57.1
18	60.0	63.8	66.3	66.2	60.5	59.7	61.3	8.56	61.5	62.6
19	62.0	64.8	63.0	59.4	62.3	64.6	61.3	62.4	62.0	62 • 1
20	54.5	55 • 4	54.3	62.0	71.9	73.7	68 • 1	57.2	58 • 7	58 • 9
21	55.2	53 • 7	57 • 6	68 • 8	76 • 8	77.5	77.8	67.C	65 • 6	67.5
55	53 • 3	62 • 9	71.2	80.0	81.8	82 • 4	81 • 3	68.2	62 • 3	64 - 1
23	55.4	62 • 4	70 • 6	73.6	71.5	71.2	73.3	70.6	60 • 9	58 • 6
24	63.8	69•0	72.5	69.9	76 • i	75 • 7	69 • 7	70.8	67•3	64.4
25	67.7	69.2	66 • 5	76.2	74.6	73 • 4	74 • 1	64.8	70 - 4	67.9
86	64.5	61.7	71.2	73 • 8	73.9	73.7	70•0	65 • 1	69 • 2	67 • 8
27	60.3	69.9	72.9	73.8	72.3	71.3	70 • 5	64.7	62 • 9	62.5
26	<b>ნ</b> \$∙7	67-4	68 • 4	70 • 2	65.3	69 • 3	67 • 7	61.8	65 • 8	63.0
29	56•9	62.5	61.7	67.8	68 • 2	67 • 7	65.0	60.9	61-1	60.9
30	56.2	57.2	56 • 8	64.2	66 • 1	65 • 9	65.0	59.9	58 • 8	56.7
31	50 <b>-</b> 5	53.7	57 • 3	63 • 4	67.2	66 • 1	65 • 5	60.5	59 • 1	58 • 3
32	50.2	52.6	57 • 7	62.8	54 • 5	63 • 4	62.0	58 • 5	54 • 4	54 • 3
33	49.8	50 • 1	56 • 2	61.6	63 • 0	63 • 1	62 • 5	61.2	55 • 1	55•5
34	47 • 2	50 • i	56 • 1	62.6	63 • 7	63.4	63 • 6	63.5	54 • 1	54.2
35	43 • 4	46.5	<b>52 • 3</b>	58 • 5	61.0	60.7	59 • 8	57.3	51 • 6	52•2
36	38 - 1	43.2	48 - 8	55.9	59 • 4	59.0	57 • 1	54 * 5	47.8	48 • 3
37	35 • 0	37.6	43 • 7	53.0	56 • 1	55•7	53+9	50 + 3	42.2	42.7
38	35.0	35 • 0	38 • 3	49.6	51 • 9	51.9	49.8	45.6	36.9	37 • 1
39	35•Q	35.0	35.0	44.1	48.0	48.0	45.6	40.2	35 • 0	35.0
40	35 ∙ Ω	35.0	35.0	37.2	41.0	40.9	38 • 6	35.0	35.0	35.0
Α	68.7	71.8	75 • 0	78.2	<b>78</b> • 5	78 • 1	76.7	72.2	70 • 8	69.7
D	72.9	75.8	79 • 6	84.0	84•3	84.3	83.0	78 • 4	75•9	75.0
OASPL	74.1	77.5	80 • 6	84.9	86.0	86.3	85.3	78 • 4	77.1	76•0
PNL	<b>7</b> 8•9	82 • 3	85 • 8	89.9	91.6	91.6	90 • 4	86.3	82.9	82 • 1
PNLT	81 • ह	82 • 3	85 • 8	89.9	91.6	91.6	90 • 4	87.7	84.2	82 • 1

#### NOISE LEVEL FREQUENCY SPECTRA TIME HISTORY

BELL 47 G

OCTOBER 5, 1976

EVENT 26, 60 MPH FLY BY, CENTERLINE MIC. ( SOFT SITE )

1/3 OCTAVE FREQUENCY BAND VS TIME (SECONDS)
(DB RE 20 MICRO PA)

BAND	-6.0	<del>-</del> 3+5	-1 -0	0	1 • 5	4.0	6•5	9•0	11+5	13.5
17	68.7	66.7	58+9	58•5	57.4	61.4	59 - 1	57 • 1	55 • 5	52 • 7
18	65.0	62 • 1	61.8	60.6	61 • 1	62.6	62.9	62.2	61 . 4	56.6
19	65.8	60.0	61.8	59.7	61.3	60.5	61.5	60 • 4	60 • 4	58 • 7
20	56.0	59.4	61.0	60 • 4	57.4	56.0	55.5	57.4	57.1	55 • 4
21	57.0	65.8	71.7	74.5	76.6	71.8	57.1	66.2	69 • 0	69.7
22	70 • 1	79.2	80 • 6	80.7	78 • 1	68.2	52.9	58 • 7	61 • 4	60 • 6
23	62.0	62.6	58.5	59.8	64.2	64.8	56.8	46.8	50.2	54.3
24	62.0	58.8	65.4	65.8	63.5	66.4	68.7	64.5	55•9	51.8
25	55.9	71.8	73.3	73.2	69.4	65-4	67.0	64.5	59 • 1	54.5
26	59.7	64.5	68.9	68.7	67.6	68.3	61 • 1	63.5	65 • 1	63 - 1
27	57.6	68.5	67.6	67.7	68 • 6	67.4	63.3	57 • 7	61 • 0	63.2
28	56.2	64.2	67 • 4	66.7	65.5	66 • 1	61.2	58.0	53 • 8	60 • 6
29	53.2	61.9	66 • 1	65•6	65 • 1	64.5	61.9	62.4	58 • 8	55 • 4
30	53.6	62.2	64.2	63.7	63.7	64.0	60.3	60.3	59 • 1	60 • 3
31	55.1	65.6	65.5	65.4	66•5	65 • 1	64.1	61.3	57.9	56.5
32	54.6	62.6	63.8	63.8	64.4	63 • 1	58.2	58 • 1	56 • 1	54.7
33	54.6	62.7	63.7	63.9	63.5	63.5	56.5	57.0	55 • 3	52.0
34	55 • 5	64.9	64.5	64.6	64.0	62.6	55.0	55 • 1	53 • 8	48 • 5
35	52.3	60.9	62.3	62.7	62 • 1	59.6	50.3	50.5	47.8	45.4
36	49.4	59.1	60.6	61.0	58.5	55•5	46.8	45.9	45 • 3	45.0
37	45.8	56.0	56 • 7	57.5	55.5	50 • 3	45.0	45.0	45.0	45.0
38	45 + 0	51 • 1	52 • 6	53.5	50 • 4	45.7	45.0	45.0	45 • 0	45.0
39	45.0	46.4	48.5	49.4	46 • 1	45.0	45.0	45.0	45.0	45.0
40	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0
Α	66.8	74.9	76.3	75•9	75.9	74.7	71 • 4	69•8	68.2	67.2
D	73.3	81.6	88 • 8	83.0	85 • 5	80 • 1	75 • 6	74.4	72 • 7	71 • 4
OASPL	77.0	82 • 1	83 • 1	83.6	82.5	79 • 0	75 • 8	74.3	73 • 9	73 • 6
PNL	80.3	88 • 4	89.7	89.8	88.7	86.9	81.7	80.8	80.0	78 - 8
PNLT	80.3	89.4	89.7	89.8	88.7	86•9	83.3	80.8	80.0	80 • 3

# TROLE C-VI

#### NOISE LEVEL FREQUENCY SPECTRA TIME HISTORY

BELL 47 G

OCTOBER 5, 1976

EVENT 28, 68 MPH FLY BY, CENTERLINE MIC. ( SOFT SITE )

1/3 OCTAVE FREQUENCY BAND VS TIME (SECONDS)
(DB RE 20 MICRO PA)

BAND	-3•0	-1 •0	0	1 • 0	3.0	5.0	7.0	9•0	11.0	12.0
17	65+7	64.9	61.7	59.8	59•7	58 • 6	60 • 9	57•5	57.6	56.4
18	63 • 6	60 • 2	58 • 3	57.2	61.0	62.2	64 - 1	68.5	63.0	61.8
19	62.7	57.4	57.9	57.8	55.6	55.5	55.7	57-1	57.7	56.8
20	53.0	56.0	57.9	57.0	56.8	52.6	54.4	54.3	54 • 4	54.2
21	59 • 1	67.2	69.9	73 • 1	77.7	73 - 1	57.9	67.6	69 8	70 • 5
28	71.9	79.6	80.4	81.2	77.6	68.0	53.4	58 • 3	60.0	60 • 5
23	62.0	61.6	59 • 1	59 • 1	66 • 6	65.5	58 • 3	52.9	50 • 1	50 • 3
24	60 • 4	60.9	64.5	67.6	66.2	67.9	71 • 1	70.9	65.2	61.8
25	63.0	73.4	74.3	75 • 4	70 • B	66.2	67.9	69.2	65.5	62.4
26	63 • 1	65.5	68 • 6	70.0	69.2	69.6	61.7	67.2	68 • 3	63.7
27	59.2	69.4	68 • 6	69.9	70.5	68.3	67.8	60 • 6	65 • 0	65.2
28	58 • 1	64.7	67.3	68 • 7	67.0	68.2	65.2	6ۥ2	58.0	57.8
25	57.0	65.2	67.2	68.0	67.4	67.0	66.6	64.6	67.5	64.0
30	57.1	64 • 4	66.3	67.0	65.9	66.4	64.9	66•7	64.1	62 • 1
31	59 • 8	68 • 1	66.8	68 • 5	67.5	69.1	65 • 8	66.0	67.5	62.6
. 32	1.82	64-1	65.9	66.4	66.0	64.7	64.5	64•3	64.0	60 • B
<b>3</b> 3	57 • 1	64.3	65.2	66.3	65 • 4	64.0	63 • 9	62 • 4	61.7	58 • <b>7</b>
34	59.2	66.5	66 • 5	67.6	66 - 7	63.9	61.7	61.0	58.2	56∙0
35	55.8	63.7	63.7	65 - 1	63.9	61.3	57.4	55.2	54 - 1	50 o 7
36	52.9	68.0	62.5	64-1	61 • 5	57.6	54.7	50 • 4	47.9	44.9
37	49 • 4	59 • 4	58 • 7	61 • 4	58 • 4	53.0	48 • 2	42.8	40.6	37.2
38	45.0	55.3	54.5	57.2	54.8	48 - 1	42.9	35.5	35-1	35.0
39	39.7	50 • 4	51.0	53.2	50 • 6	41.5	36.0	35.0	35.0	35.0
40	35.0	41.8	44.3	47.6	43.4	35 • 4	35•0	35.0	35.0	35•0
A	69.3	76.3	77 • 4	78 • 5	77•5	75.9	74.3	74 • 1	74.0	71.0
D	75 • 6	83.2	83.7	84.5	83.6	80.8	79.0	78.7	77.6	75 • 4
OASPL	76.3	82.5	83.4	84.2	83.5	79.9	77.5	77.9	76.8	75.2
PNL	82.9	90 • 0	90 • 6	91 • 8	90 • 8	88 • 3	85,8	85 • 1	84.2	81 - 7
PNLT	85.9	91.3	90 • 6	91 • 8	90•8	89.4	85•8	86.3	86•3	83.0

### NOISE LEVEL FREQUENCY SPECTRA TIME HISTORY

#### BELL 47 G

OCTUBER 5, 1976

EVENT 29, 68 MPH FLY BY, CENTERLINE MIC. ( SOFT SITE )

1/3 OCTAVE FREQUENCY BAND VS TIME (SECONDS)
(DB RE 20 MICRO PA)

BAND	-3.5	5	0	2.5	3.0	5 • 5	8•5	11.5	14.5	17.5	18.5
17	68 • 5	65.8	63 • 8	59.5	59 • 4	57.6	57.6	55 • 4	53 • 6	53 • 6	55.0
18	65 • 7	59.0	57 - 1	57 • 1	57:0	58 - 1	62.3	62.9	63.7	61.8	61.4
19	65.4	56.0	56 +0	55 • 1	53.6	54 . 4	57.6	58 • 4	59 . 2	57.7	56.6
20	54 • 1	54.8	55.5	58 • 1	56.8	53 • 4	52.7	53 • 3	52.8	53.2	54.1
21	56.0	66 • 4	67 • 7	73.1	74.2	73.6	62.8	60.6	65.6	66.7	65.7
22	70.5	78.7	78 . 8	80 • 7	80.9	74.7	61.3	57.1	61.2	62.1	60 · 8
23	62.7	59.7	58 • 1	59 • 1	61.8	72.3	73.5	66.7	58 • 8	58 • 2	61 • 1
24	64 - 8	60 • 6	62.7	66.9	67.0	64.5	68 • 8	65.5	62 • 1	53.2	52 • 1
25	57.3	73.1	73.6	74.4	74.2	68 • 1	68.2	67.7	68.0	60.3	59•4
26	64.8	66.1	67.8	71.3	72.1	72.4	67.1	64.6	69.8	64.8	65.5
27	58.3	68.0	67.9	70.2	70 • 4	67.6	69.4	59 • 6	67.0	64.9	67.0
28	59.2	64.7	65.4	67.7	67.9	66 • 6	64.7	63.4	64.5	54.6	59.0
29	57.5	64.9	65.5	67.1	67.8	68.5	66.9	60.1	67.9	59.3	57 • 1
30	56.6	64.7	65.2	66 • 5	67.3	67.7	65.9	61 - 1	65 • 6	62.0	61.6
31	58.8	69.3	69.6	68 • 1	68 • 3	68 • 5	6.7 • 1	61.7	67.5	60.2	58.9
32	57.6	65.3	65.2	66.5	67.5	67.6	62.9	58 • 8	65 • 6	60 • 1	59.2
33	56 • 4	64.6	64.4	66.5	66.9	67.8	62.0	58 • 4	63 • 1	60.0	59 • 1
34	57.9	66 • 7	66.8	66.9	67.9	67.1	60.0	56.9	60.2	55.7	54.7
35	55.0	62.5	63 • 1	64.8	65 • 6	64.4	57.6	52 • 8	55•3	47.9	49.3
36	53 • 4	60.4	61.0	63.2	63 • B	61.9	55.0	47.9	50 • 0	41.6	42.2
37	49.2	57 • 3	57.7	59.8	60 • 5	57.8	49.9	41.6	43.2	35.0	35 • 1
38	44.2	52.9	53 • 6	56.0	56 • 2	52•7	42.5	36.0	35• <b>5</b>	35.0	35.0
39	39.2	48.5	49.2	51.8	51 • 1	46 • 8	36.1	35.0	35.0	35.0	35.0
40	35.0	40.3	41.5	44.6	44.1	37.1	35.0	35.0	35.0	35.0	35.0
Α	68.7	76.3	76.7	78 - 1	78 • 5	77.7	75.4	70.9	74.8	69.5	69.4
Ŋ	74.7	82.4	82.8	84.2	84.8	83.8	79 • 8	75.7	78 • 9	74.2	73.9
GASPL	76.7	81.8	82.3	84.0	84 • 4	82.0	79 • 1	75 • 1	77.3	73.4	73.3
PNL	82.4	89.7	90.0	91.3	91.9	90.9	86 • 1	82.0	85•6	81.2	80.9
PULT	82 • 4	91.2	91.5	91.3	91.9	90•9	86.1	83.2	85.6	81.2	85.1

### NOISE LEVEL FREQUENCY SPECTRA TIME HISTORY

BELL 47 G

OCTOBER 5, 1976

EVENT 30, 75 MPH FLY BY, CENTERLINE MIC. ( SOFT SITE )

1/3 OCTAVE FREQUENCY BAND VS TIME (SECONDS)
(DB RE 20 MICRO PA)

BAND	-3.0	-•5	0	1 • 0	2.0	4.5	7.0	9.5	12.0	14.5	17.5
17	66 • 8	61.5	60 • 4	60 • 5	40 E	65.4		50.0			
18	64.0	54.5			60 • 5	57.4	60.6	58 • 3	53.7	54 • 6	54 • 1
19			55.6	55+4	56+3	59-1	59+4	60 • <del>6</del>	<b>5</b> 2 ₊ 6	65 - 4	66.8
50	60 • 8	52 • 6	52 • 7	53 • 8	55 • 2	54.4	58 • 1	56•7	55.2	58•3	62 • 3
	52.2	55 • 9	57-1	58 • 7	58 • 3	54.2	56.0	55•3	54.8	55 • 5	54.6
21	59 • 4	71 • 4	72+6	75 • 6	78 - 6	76 • 1	59.2	69-1	71 - 1	70.2	64.7
55	71.7	80 • 5	80 • 4	78 • 4	75•7	66.3	55•8	54.2	60.5	63 • 1	60 • 7
23	63 • 3	60 • 6	59•0	57.3	59 • 8	64.2	59.5	52.3	52 • 1	59+9	64.2
24	59 • 8	62.2	63.7	66.8	68 • 1	60.2	69.9	68 • 5	68 • 6	56.7	52.6
25	58•5	71 - 1	71.4	70.8	68 • 6	65.2	63.1	66.7	61.8	59-1	50 • 0
86	61.0	65•9	67 • 5	68•5	68 • 7	56 • 8	60.8	66.2	66.0	66.2	59.9
27	59.7	67•9	67 • 6	66 • 4	67.2	64.9	64.1	64.5	65 • 6	67.3	62.7
28	58 • 5	63•3	63.9	65.9	65 • 8	63.5	60.0	61.7	57.0	61.5	62.2
89	55.9	61.2	63 • 4	64.8	63.9	62.9	60.3	62.7	59.6	62.2	57.0
30	57.0	62 • 4	63 • 4	64.3	63.7	64.4	60.7	65.8	59.6	65.9	56.9
31	59.0	63 • 4	66 • 2	69.1	65.7	66 • 6	59 · B	64.9	57.5	59.3	61.9
32	<b>56 •</b> 5	61 • 3	62.0	62.6	62.6	61.3	57.6	62.9	56.9	59 • 7	56 - 1
33	<b>55</b> • 5	62.2	63.2	63.3	63.8	60 • 4	58.7	61.0	56 • 4	54.4	56-4
34	57.2	63 • 5	64.4	64.2	64.9	60.9	56-8	58 • 6	52 - 4	50 • 9	52.5
35	54•3	60.7	61.5	62 • 1	62.8	58 • 5	53.2	54.6	45 • 6	48 • 5	45 • 1
36	52.0	59.3	60 • 1	60.S	61.3	56 • 9	50.3	50.2	40.6	44.0	37.6
37	48.2	56.0	56 • 8	56.5	58 • 1	53 • 5	45 - 8	42.6	36.4	36.8	36.0
38	43.5	51.5	52 • 1	52 • 1	54 - 1	48.9	39.0	36.4	36.0	36.0	36.0
39	38.0	46.4	47.0	48.3	50 • 9	43 • 1	36.0	36.0	36.9	36.0	36.0
40	36.0	38 • 6	39.2	40.8	43.5	36.6	36.0	36.0	36.0	36.0	36.0
Α	63.2	74.2	75 • 1	75.9	75 • 5	73.0	69.9	72.9	69.0	71.2	68 • 1
D	74.7	80.8	81.5	82.2	82.2	78 • 6	75.2	77.1	73.7	74.9	72.5
OASPL	75.8	82 • 1	82.4	82.8	82.8	78 • 6	74.4	76.2	74.7	75 • 4	73.3
PNL	81.5	88 • 5	89.0	88.9	89.3	85 • 8	81.9	83.7	80.3	81 • 6	
PNLT	81.5	88 • 5	90 • 1	90.7	89.3	87.1	81.9	83 + 7	80 • 3	83 • 1	79 - 1
		30 - U		20-7	3743	37-4	94.9	001/	00.3	02 • 1	80.9

#### NOISE LEVEL FREQUENCY SPECTRA TIME HISTORY

BELL 47 G

OCTOBER 5, 1976

EVENT 31, 75 MPH FLY BY, CENTERLINE MIC. ( SOFT SITE )

1/3 OCTAVE FREQUENCY BAND VS TIME (SECONDS)
(DB RE 20 MICRO PA)

BAND	-4.5	-1 •0	0	2.5	6•0	9•5	13=0	16.5	20+0	20•5
17	67 • 5	68 • 2	62.8	59.2	57.4	53.5	55 • 4	56.0	52.7	52.9
18	64.7	59.9	57.3	55.5	63 • 1	64.1	64.3	61.5	58 • 7	57.5
19	65 • 4	55 • 1	56 • 1	54.5	59.0	59 • 1	58 • 4	56 • 4	56 • 4	55.5
50	52 • 3	58 • 1	60•0	56.2	51 • 4	52 • 3	52 • 8	53.8	53.5	53.8
21	54 • 6	67 • 5	69.2	73 • 7	70 • 0	59 • 6	66 • 4	68.5	68 - 1	68 • 6
88	68•7	79.4	79.7	79.6	68•5	56.5	60•5	62.8	63.0	63.5
23	63 • 1	61.8	57.9	62.3	75•0	ú9∙9	58 • 4	60.3	61 • 4	60 • 4
24	63•6	61.8	64.2	65 • 4	66•4	65•6	59 • 1	53.9	52.2	51.5
25	56.7	73.2	74.1	71.3	65 • 6	67.8	63+8	68.0	56 • 4	54.6
26	60 • 0	65+5	68 • 7	70.0	69.9	63.3	65•9	68.0	64.4	62 • 1
27	60 • 5	69.2	69•6	69 • 4	67.5	63.5	63 • 5	67.8	67.2	65.3
28	58•0	65 • 3	66 • B	68•0	67.3	65 • 1	56.9	59.2	64.1	65.0
29	56 • 5	65 • 0	65•7	67.2	67.3	63.0	63 • 4	63.0	59 • 4	57.2
30	56∙5	64.6	63.9	66.3	65 • 2	62.8	60.6	65 • 4	66.7	63•7
31	56.3	67.8	68 • 5	69•5	66•4	63 • 1	62.9	62.7	65.2	65.0
32	54.9	64.7	64.5	65.7	65 • 1	61 • 1	59.3	62 • 4	61.4	56 • 6
33	55 • 1	63.6	64.1	65.7	64.7	60.7	56 • 8	60.2	56.9	52 • 2
34	57 • 6	<b>ó5∙</b> 5	65.5	66•4	64 • 6	59 • 1	54.2	56.0	54 • 1	49 - 1
35	53 • 3	63.3	62.7	64.0	61 • 4	54.5	48•9	49.9	47.3	43.5
36	50 • 6	61.0	61.0	62.2	57.3	50 • 1	44.0	44.2	39.9	37.5
37	47.2	57.3	58 • 1	59.0	52.9	43.8	37.8	37.2	35.0	35.0
38	42.8	53.0	53 • 0	54.9	47.6	36.6	35.0	35.0	35.0	35.0
39	37 • 2	48.3	49.2	50 • 5	40.8	35.0	35.0	35.0	35.0	35.0
40	35.0	40 • 6	42.4	43.5	35.0	35.0	35.0	35.9	35.0	35.0
A	67 • 3	76.2	76.8	77.7	75.9	72.1	70.2	72.4	72 • 1	69+4
D	74.2	82.1	82.5	83.5	81.5	77.6	74.4	76.3	75 • 4	73 • 1
OASPL	75 • 9	82.5	82.8	83.3	80•5	76.6	74.1	75•7	75 • 2	73.8
PNL	81 • 3	89.4	89.7	90.7	88•6	83.7	80.9	82.6	81.6	79.4
PNLT	82.4	90 • 5	91.1	91.8	88•6	83.7	82.5	85.6	83 • 1	80.8

#### NOISE LEVEL FREQUENCY SPECTRA TIME HISTORY

#### BELL 47 G

OCTOBER 5. 1976

#### EVENT 33, 75 MPH FLY BY, CENTERLINE MIC. ( SOFT SITE )

# 1/3 OCTAVE FREQUENCY BAND VS TIME (SECONDS) (DB RE 20 MICRO PA)

BAND	-4.5	-2.0	0	•5	2.0	3•0	5•5	8•0	10.5	13.0	14.5
17	65.2	67.0	65.2	61.7	57.7	59.8	59.3	58 • 1	55.7	56 • 1	54.9
18	67 • 0	60.9	58.9	58 • 4	60 • 4	61.1	62.9	62 • 7	60 • 1	61.2	59.8
19	67 • 8	60 • 6	61.8	61.0	60.2	60 . 1	63.4	60 - 1	59 • 1	59.0	57.5
20	€4.7	58 • 1	62.4	63.1	61.5	62.2	58.5	56+0	56.9	56.3	56.3
21	54.9	63.7	67.4	67.7	70 - 4	72 - 1	69.6	59.7	63.2	65.2	66.4
55	69 • 1	77.2	79.4	79.4	81.1	81.4	74.8	62.5	63 • 7	65.2	65.5
23	64 • 4	66 • 9	64 • 1	63.6	63.5	65.3	73.4	69 • 7	66.2	55.0	55.4
24	64.3	62 • 1	64.4	64.9	65 • 2	65 • 1	68.9	68 - 1	67.3	60.8	56.7
25	59.6	71.2	74.6	74.6	75.0	72.8	66.9	70.0	71.5	66 • 4	63.0
26	64.0	64.8	70.5	70.9	70.7	70 • 3	73.2	63.2	70 • 4	69.8	67.2
27	60 • 2	66 • 8	68+0	68+5	70 - 7	71.4	68 • 6	68.0	62.4	66.7	66.7
28	57 • 8	61.7	68•3	68.5	68 - 1	67.1	68 • 8	64.1	66.2	59.5	60.6
29	56 • 7	63.5	67 - 1	66.7	66 + 8	67.3	69.4	67.2	63.9	65 • 6	62.7
30	56 • 5	64.7	65.6	65.2	66.7	67.1	68 - 4	67.0	65 • 5	60.6	63.1
31	56 • 6	65 • 3	67 • 1	66.5	68.9	69.1	69.5	68 • 5	64.7	62.6	61.0
32	54.8	64.5	66.2	65.9	68 • 2	66.6	69.2	66.2	64.2	58 • 7	57 • 8
33	54.2	63 • 1	65.8	65.9	67 · C	66.1	67.6	64.2	63 • 4	56.7	56.0
34	56 • 6	64.7	66 • 4	66.3	68 • 3	66.5	66.7	60.9	60 • 3	56 • 4	56.5
35	53 • 5	61 • 1	64.0	63.7	65 • 5	64.4	64.4	57.8	55•5	51.9	51.6
36	51.2	59•0	62.0	61.7	63.8	62.1	61.3	55.0	52.3	47.3	46.8
37	47.5	55.2	59.0	58.8	59.7	58 <b>•7</b>	56.4	50 • 4	45.9	39.5	38.0
38	42.9	51.2	55.0	54.7	57.3	54.5	51.4	43.5	38 • 3	35.0	35.0
39	38•0	46.4	50 • 6	50.6	52.9	50.2	44.4	37.4	35•Q	35.0	35.0
40	35.0	38 • 1	43.0	42.9	45•6	42.5	36.2	35.0	35.0	35.0	35.0
A	67.9	74.8	77 • 4	77.7	78.7	77.9	78 • 6	75 • 4	74.6	72.0	71 .9
D	74.3	81 • 1	83.7	83.8	84.8	83.8	83.9	79.6	79.3	70.3	74.9
OASPL	77.1	80.8	83.3	83.3	84.2	84.0	82.2	78.5	78 • 4	76.2	75.0
PNL	81 •8	88.3	90•6	90 - 5	92.0	91.1	91.1	86.7	85.8	83.2	81.8
PNLT	81 • 8	88•3	90•6	90.5	98•0	91.1	91.1	86.7	86.8	85.0	81.8

#### NOISE LEVEL FREQUENCY SPECTRA TIME HISTORY

#### BELL 47 G

OCTOBER 5, 1976

EVENT 36. 82 MPH FLY BY. CENTERLINE MIC. ( SOFT SITE )

1/3 OCTAVE FREQUENCY BAND VS TIME (SECONDS)
(DB RE 20 MICRO PA)

BAND	-4.0	-5.0	O	2.0	5•0	8 • 0	11.0	14.0	17.0	17•5
17	64 - 7	66-1	60.4	58.8	57.5	55.9	56 • 8	55.9	61 • 0	60 • 8
18	63•5	62.4	61.4	68.8	63.5	64.9	65.4	65.5	65.1	65-1
19	64.3	56.0	56.2	55.3	56.2	56.6	57.2	56 • 8	57.0	58 • 2
80	51 01	55.1	58 • 8	56.5	50.7	50.8	51.3	50 • B	53 • 3	53 • 0
21	55 • 1	67 • 4	69.2	74.7	72.7	57.2	65+1	67.7	67.6	68.2
55	70.0	78 • 3	79.2	79.2	70.2	55.6	57.4	60.3	59.7	60.5
23	60 • 5	59.0	57.5	62 • 1	73.8	70.8	62 • 6	51.9	63.2	63 • 4
24	59 • 1	62.3	65 • 1	66•3	65.0	67.5	63 • 3	54.2	50 • 8	50 • 3
25	61.1	73.6	74.6	72.1	67.3	67.8	66.2	62.9	59 • 1	57 • 1
26	61.7	66 • 8	69•5	71.3	71 - 6	63.0	65.9	65 • 4	63-6	62.0
27	58 • 5	68 - 7	69 • 4	68:7	36-3	68 - 7	59 - 8	65.9	66 • 7	65+9
28	60 • 1	65.2	67 • 6	67.4	67.1	66•9	60 • 5	56.3	61.1	60.2
29	58.5	64.8	65•9	67.0	67.6	69.2	59 · B	61.5	57 • 4	53 • 5
30	57.3	64.6	65.5	66.7	65.9	65 • 5	58•0	59 • 7	65.0	60.9
31	57.3	65.8	66•9	67.8	66.6	66 • 6	56.1	62.5	61.0	59 • 1
32	55•3	63.3	64.8	66.6	66.3	65 • 0	55 • 5	59 • 6	59 • 7	56.0
33	54.7	62.3	64.8	66 • 4	65•3	63.5	54.7	57.5	53 • 8	51.4
34	57.3	64.5	65•6	67 - 1	64.7	60.5	51.7	54 - 4	52 • 7	49 • 4
35	55.0	61.7	63.0	64.6	61.6	57.6	47.9	47.6	47.2	44.5
36	52 • 7	59•7	60 • 8	61.7	58 • 6	53.0	44.3	40.8	39.8	37.9
37	49 • 1	55 • 6	57 • 6	58•9	53 • 8	47.1	38 • 3	35 • 1	35.0	35.0
38	42.9	51.8	54 • 1	54.9	48 • 4	39.9	35.0	35.0	35.0	35.0
39	37.1	47 • 3	49.8	50.5	41.4	35.0	35.0	35.0	35.0	35.0
40	35.0	39.6	43.2	42.5	35.0	35.0	35.0	35.0	35.0	35.0
Α	67.9	75.4	76•7	77.5	76.3	75 • 1	68.2	69.9	70.2	68 • 1
D	74.4	81.5	82.9	83.8	81.8	79 • 6	73.2	74.3	73.9	72.4
0ASPL	75.1	81.8	83.0	83.3	80.7	78 • 5	74.0	74.0	74.3	73.6
PNL	81.5	88.5	89.9	91.0	89.0	86.0	80.2	80.5	80.7	79.4
PNLT	81.5	88.5	89•3	91.0	89.0	87 • 1	80.2	81.7	82 • 6	80.9

#### NOISE LEVEL FREQUENCY SPECTRA TIME HISTORY

BELL 47 G

OCTOBER 5, 1976

EVENT 41. 9 DEGREE APPROACH. CENTERLINE MIC. ( SOFT SITE )

1/3 OCTAVE FREQUENCY BAND VS TIME (SECONDS)
(DB RE 20 MICRO PA)

BAND	-4.0	-2.5	-1.0	0	•5	5.0	3 • 5	5.0	6•5	9-0
17	66.2	66•0	67.2	65.0	63.5	60+6	62.9	66.5	68 • 1	64-1
18	62.6	61.8	61.9	57.2	56 • 4	57.0	59 • 1	60.9	60.9	63 • 4
19	58 • 5	57 • 9	57.0	57.3	57.9	60 • 4	61.4	58.0	61.9	61.5
20	57.8	60.7	69.1	68.2	65 • 4	62.0	59.4	56.8	56.2	60.3
21	60 • 4	67.9	74.3	72.7	70.5	$71 \cdot 1$	72.2	72.2	67.0	62.9
22	71.9	76.9	80.5	79.6	78.7	78 • 7	78.2	74.8	68 • 1	58 • 4
23	61.9	69.8	72.0	67.3	63.1	61.8	66-4	70 • 1	69.9	62.7
24	57 • 8	67.0	75.6	73.1	69.8	66.3	61.5	63.5	65 • 7	63.2
25	61.9	74.8	77.5	73.5	70 • 4	68.9	66.9	64.2	61 • 1	65 • 1
26	63 • 1	68 • 1	71.4	68 • 4	56.9	65.9	63.6	66.9	64.2	62.2
27	57 • 8	70 • 6	72.4	67.5	65 • 6	65+6	64.6	62.9	64.9	56•4
28	56•3	65.7	68.3	66.8	65.2	65.0	62.9	61.8	61 • 4	61.0
29	56 • 7	61.4	66.3	65.2	63.7	63 • 1	62.5	62 • 1	60.2	58•3
30	56 • 4	60 • 7	65.4	63.6	62.9	62.9	62.8	62.0	60 • 3	61.7
31	57 • 4	61.5	64.8	63.8	63.0	65.7	65.1	61.5	62.0	62.7
32	55 • 8	59•9	63.8	62.6	61.7	60.5	61.3	58 - 9	58 • 7	55•8
33	54 • 1	58.3	63.8	62.5	61.5	61 • 1	61.2	58 • 9	59.5	55.2
34	55 • 8	58 • 5	63.8	64 • 4	63.7	61.5	61.7	58 • 4	59.2	54.9
35	51.9	55•3	59.7	59•8	59•3	59.9	59.0	56 • 5	56•9	50.2
36	49.9	52•5	57.2	57.4	56.8	57.8	57.2	54.5	53 • 5	46.2
37	45.4	47 • 6	53.1	53.8	53.5	55.0	53.2	50 • 3	48.9	41 • 3
38	40•9	42.6	48.6	49:4	49.4	51.4	48 • 3	44.7	42.5	38•0
39	38.0	39.0	45.5	43.9	43.5	47.9	43.6	40 • 3	38•0	38.0
40	38.0	38•0	38.9	38.0	38 • 4	39.3	38.0	38.0	38.0	38.0
A	67.3	73.7	78.5	75.9	74.4	74.0	73 • 4	71 • 6	71.2	69.2
r	74.0	80 • 1	84.3	82.4	81.0	80.3	79.7	77•9	77.1	73.7
OASPL	76.3	81.8	85•4	83.6	82 • 1	81.5	81.2	79 • 8	77•3	74.4
PNL	80.8	86 • 9	90.8	89.2	87.9	87.7	87.0	84.9	84.0	80 • 4
PNLT	80.8	86.9	90.8	80.S	88•9	89.0	88 • 1	84.9	84.0	81.9

5 FOOT HOVER TEST

#### 1/3 OCTAVE NOISE LEVEL FREQUENCY SPECTRA

BELL 47 G

OCTOBER 5, 1976

EVENT 2. O DEGREES. MICROPHONE 150 METERS WEST

1/3 OCTAVE BAND VS LEVEL (AVE OVER 19 SECONDS)
(DB RE 20 MICRO PA)

	STD	ARITH.			ENERGY	
	DEV	AVERAGE	MIN	MAX	AVERAGE	BAND
	•0	65.8	64.9	66.5	65•8	14
	•0	67.7	66.7	68 • 4	67•7	15
0	•0	61.3	60.2	62.8	61 • 3	16
270° (Microphone Location) (Relative to Helicopter)	•0	63.0	61.1	64.5	63.1	17
[ 1 m 1 m 1	•0	71.6	70.7	72.3	71 - 6	18
/ Microphone Location	•0	82.8	81 - 7	83.9	82.8	19
Palatua + Haliantan	•0	61.5	60 • 6	62.3	61 • 6	20
I MENTING IS HELICOPIET	•0	63.2	61.8	64.3	63.3	51
	•0	71.5	70.6	72.5	71 • 6	22
	+0	65.2	63.9	67.1	65 • 3	23
	•0	71.2	69.5	73.3	71.3	24
	1 - 4	70.3	66.6	72.2	70.5	25
	1 •8	67.8	64.0	70.2	68.2	26
	1.2	64.2	61.7	66.6	64.3	27
	1.3	60.8	57.5	62.6	61 • 0	28
	1 • 6	57.7	54.8	60.2	57.9	29
	1.2	54.1	52 - 1	56.3	54 • 3	30
	•0	53 • 4	51.5	54.8	53 • 5	31
	•0	53.7	50.7	55.0	53 • 8	32
	1 + 1	54.4	52.2	56.3	54 • 6	33
	1 - 1	53.8	51.5	55.7	53.9	34
	1.0	52.3	50 • 4	54.3	52.4	35
	1.2	50.9	48.4	53.9	51 • 1	36
	1 + 3	49.9	46.7	52.3	50 • 1	37
	1.2	47.9	45.5	50 • 1	48.0	38
	•0	45.7	45.0	47.1	45.8	39
	•0	45.0	45.0	45.0	43.0	40
	•0	71 • 1	70 - 1	72.2	71.1	DBA
	•0	78.2	77.2	78.9	78.3	DBD
	•0	83.8	83.0	84.6	83 • 8	OASPL
	• 4	85.8	85.0	86 • 4	85.9	PNL

85+8

85.0

PNLT

85.9 86.4

# TABLE C-VIII. 5 FOOT HOVER TEST

#### 1/3 OCTAVE NOISE LEVEL FREQUENCY SPECTRA

BELL 47 G

OCTOBER 5, 1976

#### EVENT 3. 45 DEGREES. MICROPHO 12 150 METERS WEST

# 1/3 OCTAVE BAND VS LEVEL (AVE OVER 19 SECONDS) (DB RE 20 MICRO PA)

	ENERGY			ARITH.	STD	•
BAND	AVERAGE	MAX	MIN	AVERAGE	DEV	
• •						
14	65.0	65.8	64.3	64.9	•0	
15	67 • 0	67.9	65.9	67.0	• 0	
16	60 • 4	61.6	59.5	60 • 3	◆C	2250
17	63.7	64.8	62.4	63•6	•0	225° (Microphone le Relative to 1
18	72.7	73.6	71.0	72.6	•0	(
19	83•5	84.3	31.6	83•4	• 0	microphone u
20	61 •8	63.0	59.9	61 • 7	•0	Rolative to
21	63.5	64.6	62.2	63•4	•0	LACIOTIVE 10 .
28	71 - 1	72.8	67.7	70.9	1.5	`
23	69•2	71.9	65 • 7	68 • 8	1.9	
24	74 • 6	<b>77 •</b> 5	71 - 1	74.2	1.9	
25	70.7	73.5	66.5	70-3	1 + 9	
26	69 • 4	72.5	66.2	69 • 1	1.6	
27	69.5	72 • 1	67.9	69•3	1 • 1	
28	67.5	69.3	65.3	67.4	•0	
29	63.5	66.0	60.2	63.3	1 • 4	
30	59 • 4	62.3	55.7	59.2	1 • 4	
31	<b>57 •</b> 5	59.5	55.3	57.3	1.2	
32	56 • 8	59.2	54.3	56.7	1 • 1	
33	55 • 7	57.5	52.7	55.6	1.0	
34	53 • 7	56.3	50.9	53.6	1.2	
35	51 • 3	52.9	48.0	51 • 1	1.2	
36	49 • 1	50 • 5	46.4	49.0	1 + 1	
37	47 • 3	49.0	45.2	47.2	1.2	
38	45 • 8	47.2	45.0	45.7	•0	
39	45.0	45.0	45.0	45.0	•0	
40	45.0	45.0	45.0	45.0	•0	
DBA	73 • 8	75.8	71.3	73.6	1 • 1	
DBD	79.8	81.3	77.6	79.7	1.0	
0ASPL	84.5	85 • 6	83.0	84.7	•0	
PNL	57·3	88 • 4	85.0	67.2	• 9	
* ***	07.40	0014	00.0	0116	* 7	

PNLT

87.3

88.4

85.0

• 9

87.2

## TABLE C-DIL

#### 5 FOOT HOVER TEST

#### 1/3 OCTAVE NOISE LEVEL FREQUENCY SPECTRA

BELL 47 G

OCTOBER 5, 1976

EVENT 4, 90 DEGREES, MICROPHONE 150 METERS WEST

1/3 OCTAVE BAND VS LEVEL (AVE OVER 19 SECONDS)
(DB RE 20 MICRO PA).

BAND	ENERGY AVERAGE	MAX	MIN	ARITH. AVERAGE	STD DEV
14	67.0	67.9	66-1	66.9	•0
15	67.2	68 • 3	65 • 5	67.1	•0
16	61 - 2	61-7	60.2	61.1	٠Û
17	64.9	66 • 4	63 • 5	64.8	•0
18	69.7	70.9	68.5	69.7	•0
19	76.9	79•8	73 • 1	76•5	1 • 7
20	61 • 4	63.5	57.9	61.2	1 - 4
21	68 • 9	70.5	67.3	68∙8	•0
22	81.8	83.2	80.6	81.7	•0
23	69 • 1	71.0	66 • 8	68•8	1 • 4
24	73.8	77.5	69 • 1	73.2	2.4
25	74 • 2	77.0	71.2	74.0	1 • 5
26	72.0	73 • 4	69•5	71 • 9	•0
27	72.7	75•5	69•9	72 • 5	1 • 3
26	66 • 7	70 • 3	66+6	68•6	1 -0
29	64.0	66•2	61.6	63•8	1 • 3
30	60 • 0	62.3	57 • 6	59 • 8	1.2
31	57.1	60 • 1	54.2	56•9	1 - 4
32	56•6	61 • 1	52 • 9	56 • 1	2.0
33	55 • 1	59•3	52.2	54.6	1.8
34	53 • 7	57 • l	51.5	53 • 4	1 - 4
35	51.5	54.0	49.6	51 • 4	1.2
36	49 • 3	52 • 6	47.2	49 - 1	1-4
37	47 • 1	49 • 7	45.3	47.0	1.2
38	45•6	47.7	45.0	45.5	•0
39	45•0	45•4	45.0	45.0	•0
40	45 • 0	45.0	45.0	45.0	•0
DBA	75•7	76•9	74.0	75•7	•0
DBD	81 • 7	82 • 4	80 • 4	81.7	•0
OASPL	84 • 8	85•5	83•9	84.8	•0
PNL	0.68	89.7	87.9	88.9	• 5
PNLT	89•0	89.7	87•9	88•9	•5

180°
(Microphone Location
Relative to Helicopter)

### 5 FOOT HOVER TEST

### 1/3 OCTAVE NOISE LEVEL FREQUENCY SPECTRA

BELL 47 G

OCTOBER 5. 1976

#### EVENT 5. 135 DEGREES. MICROPHONE 150 METERS WEST

#### 1/3 OCTAVE BAND VS LEVEL (AVE OVER 19 SECONDS) (DB RE 20 MICRO PA)

	ENERGY			ARITH.	STD
BAND	AVERAGE	MAX	MIN	AVERAGE	DEV
14	65 • 4	66.2	64.3	65•3	•0
15	68•3	69.5	66.8	68•3	•0
16	61 • 4	63.0	59.7	61 • 3	• 0
17	64.2	65.9	61 • 8	64.1	•0
18	70•3	72.0	68.3	70•2	•0
19	80 • 1	81 • 4	78 - 1	79.9	1 - 1
20	65.9	70.9	60 - 4	65•0	2.6
21	69+9	73.4	66•6	69 • 6	1 • 7
22	76 • 5	79.1	72.3	76 - 1	1.9
23	74.8	77.0	72.3	74.7	1.2
24	78.9	81 • i	76•7	78•8	1 - 1
25	76.6	80 • 4	73 • 4		1.9
26	77 • 1	80.3	73 • 7	76•7	1 • 8
27	76.5	79.0	71.9	76.2	1 • 7
28	73 • 6	76.5	70•6	73.2	1.8
89	67 • 6	72.2	64 • 1	67•2	1.9
30	61.5	65•3	58 • 6	61 • 1	1 • 8
31	58 • 6	63.0	55.3	58 • 1	2.0
32	60.3	64.6	56.2	59•5	2.5
33	57•9	61.3	53.0	57.4	2.2
34	56 <b>•</b> 0	59•3	50 • 4	55 • 5	2 - 1
35	54.5	57•9	48.3	53•9	2.4
36	51 • 6	54.4	46.9	51.3	1.9
37	49.4	51.2	45.5		1.5
38	46.9	48.3	45•0	46 • 8	•0
39	45.0	45.2	45.0		•0
40	45 • 0	45.0	45.0		•0
DBA	79.2	81.4	76 • 5	79•0	1 • 4
DBD	84.0	86.2	81 • 1		1 • 3
OASPL	86•3	88.0	84.2		•0
PNL	91 • 1	92.8	88.2	90•9	1.2
PNLT	91.2	93.9	88 • 2	91 • 1	1.2

135° (Microphone Location \ Relative to Kelicopter)

5 FOOT HOVER TEST

#### 1/3 OCTAVE NOISE LEVEL FREQUENCY SPECTRA

BELL 47 G

OCTOBER 5, 1976

EVENT 6, 180 DEGREES, MICROPHONE 150 METERS WEST

1/3 OCTAVE BAND US LEVEL (AVE OVER 19 SECONDS) (DB RE 20 MICRO PA)

	ENERGY			ARITH.	STD	
BAND	AVERAGE	MAX	MIN	AVERAGE	DEV	
14	66+6	67.8	64.9	66+5	•0	
15	67.6	68.6	66 • 5	67.6	•0	
16	60 <b>•</b> 9	62.9	58 • 8	60 • 7	1 + 1	
17	63.2	65.9	60 • 6	63+0	1.3	
<b>1</b> 8	70.2	71.3	68.8	70.2	•0	90° (Microphone Location Relative to Helicopter)
19	81.2	82.0	80.3	81.2	• 0	
20	67 • 1	71.5	63.9	66 • 6	2.1	Microphone Location
ខរ	67 • 3	69.6	64.03	67-1	1.4	
22	73.0	75.2	70.3	72.9	1.2	Relative to Helicopater
23	70 • 1	72.0	66.9	69.8	1.6	
24	73.5	75.3	70.3	73 • 3	1.6	
25	74.2	76.5	69.9	73 • 9	1 - 7	
26	73.0	75.0	67.5	72-4	2.2	
27	78 •1	77.2	67.5	72 - 4	2.4	•
28	70 • 8	73 • 7	66.2	70 - 3	2.2	
29	66 • 2	69.5	62.2	65.8	1.9	
30	50 • 6	62.9	56.0	60.2	1.9	
31	57.8	61.3	53 • 4	57.2	2.3	
<b>3</b> 2	57.6	61 • 1	52.9	57.0	2.3	
33	56 • 2		52.5	55 • 7	2 • 1	
34	54 • 1	57.6	51 • 1	5 <b>3 • 7</b>	1.9	
35	52 • 4	55.9	49.4	51.9	1.9	
<b>3</b> 6	51.2	54.8	48.9	50 • 8	1.7	
37	49 • 5	52.5	47.1	49.2	1 . 5	
38	47 • 1	49.5	45.4	46.9	1.2	
39	45 • 3	46 - 5	45.0	45.2	•0	
40	45.0	45.0	45.0	45.0	•0	
$\mathbf{DB} \mathbf{B}$	76 - 1	78•6	72.1	75.8	1.8	•
DBD	80 • 9	83.2	77.7	80 • 6	1.5	
OASPL	84.3	85• <b>5</b>	82.8	84.2	•0	
FNL	88 • 2	90.8	85.2	87.9	1.6	
					_	

87.9

1 • 6

85.2

30 • 8

PNLI

88.2

5 FOOT HOVER TEST

# 1/3 OCTAVE NOISE LEVEL FREQUENCY SPECTRA

BELL 47 G

OCTOEER 5, 1976

EVENT 7. 225 DEGREES, MICROPHONE 150 METERS WEST

1/3 OCTAVE BAND VS LEVEL (AVE OVER 19 SECONDS) (DB RE 20 MICRO PA)

	en e			ARITH.	STD		
	ENERGY	MAN	MIN	AVERAGE	DEV		
BAND	AVERAGE	WUX	111 14	HATUMOD	32 V	-	
14	66•7	67.7	65.3	66•7	•0		
15	68 • 4	69.3	67.0	68 • 4	•0		
16	61.9	62.9	61.0	61.9	•0		
17	65.0	66.0	63.4	65•0	•0		
18	68 • 3	70-4	64.4	68 - 1	1 - 4	ULO	
19	76.2	77.3	73.1	76 • 1	• O	79	•
20	60.9	63.8	58.9	60 • 7	1 • 2	1 1	1 agation
21	61 • 4	65.3	57.9	61 • 0	1 - 7	(Microphone Relative to	LOCATION
22	61 47	63 - 1	58.3	61.5	1.2	101+ +	Holizanter
23	63+3	54.9	61.4	€3•2	•0	Kelalive 10	Hemogram
24	68.0	69.4	65.3		1.0	•	
25	67.8	69.7	64.8	67.6	1.3		
26	67.2	69.8	64.3	67.0	1.5		
27	66.6	66.8	64.1	66-4	1.3		
28	63.5	65 • 4	61.1	63 • 4	1.0		
29	59.9	61.9	57.6	59.8	•0		
30	54 • 4	56.5	51-2	54.2	1 - 4		
31	52 - 4	55.7	49.6		1 • 7		
32	51.9	55.7	49.6	51.6	1 • 7		
33	50 • 8	54.3	48.2	50.4	1.7		
34	49 - 1	52.4	46 • 1	48•7	1 • 7		
35	48 - 1	51 • 4	45.7	47.8	1 • 6		
36	48 • O	51.0	45 • 7	47.8	1 • 3		
37	46.9	49.5	45 - 1	46.7	1 - 1		
38	45.5	46+8	45 • 0	45.5	•0		
39	45.0	45+3	45.0	45.0	•0		
40	45 • 0	45.0	45.0	45.0	•0		
DBA	ŭ\$∙9	71 - 7	67+1	69 • 7	1.2		
DBD	74.8	76 - 4	72 • 3		•0		
OASPL	79.1	80 • 8	77.	79.1	• 0		
FNL	82.3	84-0	80 - 1	82.2	1.0		
2419			~~ .		1 0		

1.0

PALT

82.3

84.0

80 • 1

82.2

5 FOOT HOVER TEST

#### 1/3 OCTAVE NOISE LEVEL FREQUENCY SPECTRA

BELL 47 G

OCTOBER 5, 1976

EVENT 8, 270 DEGREES, MICROPHONE 150 METERS WEST

1/3 OCTAVE BAND VS LEVEL (AVE OVER 19 SECONDS)
(DB RE 20 MICRO PA)

	ENERGY			ARITH.	STD	
BAND	AVERAGE	MAX	MIN	AVERAGE	DEV	
14	68+5	69•3	67.5	68 • 5	•0	
15	67 • 3	68.8	65.7	67.2	•0	
16	60 • 9	62.3	59.6	60.9	•0	
17	64 • 6	66.4	63.2	64.5	•0	<b>⊘°</b>
18	64.9	66•7	63 • 1	64.8	•0	0
19	66 - 1	69-4	62.4	65 • 4	2.4	(Microphone Location Relative to Helicopter)
20	56 • 8	60 • 3	54.6	56.5	1.5	Microphone Location
21	61.0	62.5	59-1	60.9	•0	
22	65 • 9	67.2	61.5	65.7	1 • 4	Relative to Helicopter
23	60 • 7	61.3	58.7	60 • 6	•0	
24	63 • 8	66 • 6	60.3	63.3	2.1	
25	63.5	65+2	60.9	63.4	1.2	
26	64 • 2	66+1	61 • 4	64.0	1.3	
27	64 • 0	67.5		63.6	1.8	
28	60 • 6	64.2	57.7	60 • 2	1 - 7	
29	55 • 8	59.2	51.7	55 • 4	1.9	
30	50 • 3	53 ∙ 8	47.7	50.0	1 - 4	
31	48 • 1	50•9	46.2	47.9	1.2	
32	48 • 5	52.2	45.7	48 • 1	1.6	
33	47 • 2	49.7	45.2	47-1	1 - 1	
34	45.9	47.7	45.0	45.8	•0	
35	45.0	45 - 4	45.0	45.0	•0	
36	45 • 0	45+5	45.0	45.0	•0	
37	45 - 0	45.2	45.0	45.0	•0	
38	45 • 0	45∙0	45.0	45.0	•0	
39	45 • 0	45.0	45•0	45.0	•0	
40	45 • 0	45.0	45.0	45.0	• 0	
DBA	66 • 6	69•0	64.6	66 • 4	1.2	
משמ	71 • 4	73 • 1	70 • 0	71.3	-0	
OASPL	75 • <u>6</u>	76.2	74.8	75 • 6	+0	
PNL	79.3	81.0	78.2	79.2	• 8	
PNLT	79•3	81.0	78.2	79•3	•8	

260

5 FOOT HOVER TEST

#### 1/3 OCTAVE NOISE LEVEL FREQUENCY SPECTRA

BELL 47 G

OCTOBER 5, 1976

#### EVENT 9, 315 DEGREES, MICROPHONE 150 METERS WEST

# 1/3 OCTAVE BAND VS LEVEL (AVE OVER 19 SECONDS) (DB RE 20 MICRO PA)

DAND	ENERGY AVERAGE	MAN	MITAT	ARITH.	STD	
BAND	AVERAGE	MAX	MIN	AVERAGE	DEV	
14	68•0	68.7	67.4	68 • 0	۰0	
15	68 • 3	69.2	67.4	68 • 3	•0	
16	62.4	63.9	61.3	62 • 3	•0	
17	65 • 3	66.5	63.9	65 - 2	•0	
18	69 • 4	70.5	68.1	69-4	•0	
19	78 • 4	79.4	77.0	78 • 4	•0	
20	59 • 6	60 • 3	58 • €	59 • 6	•0	/
21	62.3	62.9	61.4	62 • 3	•0	- /
38	65.9	66.9	65.0	65.9	•0	- 1
23	63.0	68.7	60.2	62 • 4	1.9	( )
24	67.0	69.2	63.7	66 • 8	1 • 4	1
25	67,7	68.9	ა5 • 2	67.6	• 0	
26	67.3	74.8	63.3	65.9	2.7	
27	64.2	67.7	61.3	63 • 6	2.0	
28	61.9	68 • 8	58.5	60.8	2.5	
29	58 • 8	67.3	54.6	56 + 8	3-1	
30	55.5	64.6	49 34	52 • 5	3.7	
31	54 • 9	64.3	48.8	51 • 6	3.9	
32	55.3	64.8	48 • 8	51.7	4.0	
33	54.5	63.8	48.6	51 • 3	3.8	
34	53 • 3	62 • 6	47.0	50 • 0	3.9	
35	50 • 5	59 • 1	45 - 4	46.2	3.4	
36	48 • 3	55.7	45 • G	46.9	8 • €	
37	46 • 6	52.5	45.0	45.9	2.0	
38	45 • 4	47.6	45.0	45 • 3	•0	
39	45.0	45.0	44.4	45.0	•0	
40	44.9	45.0	43.6	44.9	•0	
DBA	69 • 5	76.4	67 • 1	68 • 5	2.3	
DBD	<b>7</b> 5 • 5	80.6	73.4	75•0	1.7	
OASPL	80.5	88 • 0	79.7	80 • 5	•0	
PNL.	82.0	82.7	81.2	82.0	•4	
PNLT	88 • 0	82 • 7	81.2	82•0	-4	

315°
(Microphone Location Relative to Helicopter)

#### 5 FOOT HOVER TEST

#### 1/3 OCTAVE NOISE LEVEL FREQUENCY SPECTRA

BELL 47 G

OCTOBER 5, 1976

#### EVENT 2, O DEGREES, MICROPHONE 150 METERS EAST

1/3 OCTAVE BAND VS LEVEL (AVE OVER 19 SECONDS)
(DB RE 20 MICRO PA)

	ENERGY			ARITH.	STD	
BAND	AVERAGE	MAX	MIN	AVERAGE	DEV	
14	67.3	68.0	66.6	67.3	•4	
15	67.0	68.0	65.9	67.0	•5	
16	60 • i	61.6	58.3	60.0	• 7	_
17	61 • 7	63.6	58 • 8	61.6	1 - 1	90° (Microphone Loc Relative to Hel
18	70 - 1	71.6	68 • 4	70 • 0	8 ء	, ,
19	81 • 9	82.8	81.0	81.9	• 6	Missa dans las
20	60 • B	62 • 1	59.4	60 • 7	• 7	I MILETO PHONE BUE
21	64.5	66.0	61.9	64.4	1.0	Politico to Her
22	73.2	74.7	72 - 1	73 • 1	• 9	Kelblive to the
23	69 • 3	71.0	67.7	69.2	• 3	•
24	75 • 1	76.8	73.5	75 • 0	•9	
25	73 • 9	75•7	71-4	73•7	1 + 1	
26	71.2	73.5	67.5	70•9	1 • 6	
27	71.8	75.0	66.5	71.4	2 • 1	
28	68.0	71.8	65.0	67 • 6	1 •8	
29	66.8	70.2	64.6	66 • 6	1 - 4	
30	65 • 0	67.6	61.4	64.7		
31	64.6	67 • 4	61.0	64.3	1.7	
32	62.0	64 • 1	59•4	61.8	1 - 4	
33	58 • 6	62.5	54.7	58 • 1	2 • 2	
34	57 • 7	61 • 0	53.3	57.2	2 • 1	
35	55 • 9	60 • 1	50 • 6	55•2	2.6	
36	54.9	58.7	50.2	54 • 4	2.2	
3 <b>7</b>	52 • 4	55.0	48.0	52 • 1	1 • 7	
38	49 - 1	52.4	46.3	48.9	1.5	
39	45.8	47.8	45.0	45+8	• 7	
40	45.0	45 • 0	45.0	45.0	•0	
DBA	76 • 2	78.2	73.8	76.0	1 - 1	
DBD	81 • 7	83.2	79.2	81 • 6	1.0	
OASPL	84.6	85.4	83.6	84.5	•6	
PNL	88 • 7	90.2	86.5	88.6	1 -0	
			01 -	00 6	1 0	

1.0

88.6

90.2 86.5

88 • 7

PNLT

# TABLE C-VIII.

## 5 FOOT HOVER TEST

#### 1/3 OCTAVE NOISE LEVEL FREQUENCY SPECTRA

BELL 47 G

OCTOBER 5. 1976

EVENT 3, 45 DEGREES, MICROPHONE 150 METERS EAST

1/3 OCTAVE BAND US LEVEL (AVE OVER 19 SECONDS) (DB RE 20 MICRO PA)

BAND	ENERGY AVERAGE	MAX	MIN	ARITH. AVERAGE	STD DEV
9.7		47 C	65.0	44.0	•7
14	56 •2	67•6 68•8	65•0 67•0	66•2 68•0	•4
15	68 • 0	62 • 1	59.7	61 • 1	•6
16 17	61•1 63•8	65.8	62.4	63.8	•7
	68 • 1	68+9	67.0	68•0	• 5
18 19		79.6	77.8	78 • 5	•5
	78 • 6	60 • S	58.1	58 • 9	•6
20 21	58.9	61.5	58 • 9	60 • 1	•7
22	60 • 1 60 • 9	63 • 1	58 • 8	60 • 7	1.4
23	δ4 • <b>7</b>	65.9	62 • 8	64.7	•8
23	70.0	71.4	68 • 1	69.9	1.0
				66.9	i • 6
25	67.2	69 • 3	62.9	66 • 3	2.2
26	66 • 8	70 • 4	62.0	63.8	2.0
27	64.3	67.7	60 -0		1.7
28	60 • 3	64.0	57 • 3	59•9	1.7
29	58 • 8	61.0	54.3	58.5	
30	56 • 8	58 • 6	52 • 9		1.5
31	55.5	58 • 6	50 • 9		1.9
32	53.9	56 • 7	49.6	53.5	1.9
33	51 • 3	54.0	47.0	51.0	1 • 7
34	49.9	53.0	46 • 1	49.5	1 • 7
35	47.6	51 • 3	45.0	47.3	1.5
36	47.0	50 • 5	45.0	46.7	1.5
37	45•7	48 • 1	45 • 0	45 • 6	• 9
38	45 • 1	45 • 9	45 • 0	45.1	• 3
39	45.0	45•0	45 • 0	45.0	+0
40	45.0	45.0	45.0	• -	• 0
DBA	69•7	72 • 0	67.2		1.4
DBD	50.0	50•6	50.0	50.0	•()
OASPL	80.4	81.2	79.5		•5
FNL	82 • 6	84.3	81 • 1	82.5	• 9
PNLT	82.6	84.3	81.1	82+5	• 9

Microphone Location
Relative to Helsoftia

#### 5 FOOT HOVER TEST

#### 1/3 OCTAVE NOISE LEVEL FREQUENCY SPECTRA

BELL 47 G

OCTOBER 5, 1976

EVENT 4, 90 DEGREES, MICROPHONE 150 METERS EAST

1/3 OCTAVE BAND US LEVEL (AVE OVER 19 SECONDS)
(DB RE 20 MICRO PA)

	ENERGY			ARITH.	STD
BAND	AVERAGE	MAX	MIN	AVERAGE	DEA
14	67.6	68•2	66.9	67.5	• 3
15	67•5	68•6	66•3	67 • 5	• 7
16	60 • 9	62.6	59.2	60.8	• 9
17	65 • 3	66•6	62 • 6	65 • 2	1 • 1
18	<b>65•</b> 0	66 • 4	63 • 8	65.0	• 7
19	63•9	67•7	61 • 1	63.5	1.8
20	57 • 8	60 • 4	53 • 2	57.5	1.7
21	63.2	65•1	61 • 5	63.0	1 • 0
55	68 • 1	70•0	64.3	67 • 9	1.3
23	64 • 1	65.3	62 • 4	64 • 1	• 7
24	69+2	71.3	65 • 1	68 • 9	1 • 7
25	63 • 5	64.7	62 • 5	63+5	e 6
26	66 • 2	69+0	63.3	65 • 8	1 -8
27	63.2	64.5	59 • 7	62.9	1.5
28	61 • 4	63•3	57.4	61.0	1.8
29	59 • 6	62•3	56 • 8	59.4	1 • 3
30	57 • 4	60.2	54.1	57.2	1 - 6
31	57 • 1	59.9	53 • 1	56.7	1.9
32	55•7	60 • 2	51.5	55 • 1	2.1
33	53 • 2	57.0	49.4	52.9	1.7
34	52 • 3	55 • 5	48.4	52.0	1.6
35	49.6	52.6	45.6	49.2	1.9
36	48.5	51 - 4	45.5	48.2	1 • 6
37	47 • 7	50.2	45.0	47.3	1.7
38	46.0	48.1	45.0	45.9	۰9
39	45.0	45.0	45.0	45.0	•0
40	45.0	45.0	45.0	45.0	•0
DBA	69.5	71.2	67.5		1.0
ນອນ	74.6	76.3	73.1		•8
OASPL	77.1	78.0	76.2		•6
PNL	82 • 1	83.9	80 • 6		•9
PNLT	82.1	83.9	80.6	82.0	1.0

Microphone Location
Relative to Helicopter

5 FOOT HOVER TEST

# 1/3 OCTAVE NOISE LEVEL FREQUENCY SPECTRA

BELL 47 G

OCTOBER 5, 1976

EVENT 5. 135 DEGREES. MICROPHONE 150 METERS EAST

1/3 OCTAVE BAND US LEVEL (AVE OVER 19 SECONDS)
(DB RE 20 MICRO PA)

	ENERGY			ARITH.	STD	
BAND	AVERAGE	MAX	MIN	AVERAGE	DEV	
14	64 - 1	64.8	63.0	64 • 1	•5	
15	66+6	67 • 7	65∘6	66•6	•6	
16	60 • 8	61.8	59.4	60 <b>-</b> 8	•6	•
17	63 + 9	65 - 1	60.8	63+8	1 • 1	2/50
18	69.5	71 0	67•8	69•4	• 9	3,5
19	77.9	79.2	75•5	77•7	1 - 1	(m. home Location)
20	59 • 3	61 • 3	57.3	59•2	•9	Inicrophone Bottom
21	63 • 8	64.5	62.2	63•8	•5	last to + Helicapter
22	65.5	66.9	63.2	65 • 4	1 - 1	315° (Microphone Location) Relative to Helicapter)
23	63 • 6	65.1	61.7	63.5	•9	
24	67 • 2	<b>58∙8</b>	64.2		1 • 4	
25	66 • 1	67 . 6	63.7	65•9	1 • 1	
26	64.5	68 • 6	60.7		2 • 4	
27	62 - 8	65-4	59.1	68.3	5.0	
28	61.3	65•2	56.7	60.5	2 • 5	
29	57 • 5	61.3	53.8		8 • 8	
30	55.6	59•4	51.8	55•0	2.3	
31	55.2	59.5	51.7		8.0	
32	53+0	60.0	48.2		3.2	
33	49.7	53 • 4	46.8		8.0	
34	48 • 1	52 • 4	45.0		2 • 1	
35	46.0	49.0	45.0		1 • 2	
36	45 • 5	47.7	45.0		• 8	
37	45.0	45.2	45.0		• 1	
38	45.0	45.0	45.0		•0	
39	45.0	45.0	45.0		•0	
40	45.0	45.0	45.0		•0	
DBA	68 - 3	70 • 5	66.0		1.5	
DBD	74.9	76.6	72.9		1.2	
QASPL	79.8	80.9	78 • 8		•9	
PNL	81.7	83 - 5	79.9	81.5	1.5	

81.7

79.9

84.5

PNLT

5 FOOT HOVER TEST

#### 1/3 OCTAVE NOISE LEVEL FREQUENCY SPECTRA

BELL 47 G

OCTOBER 5, 1976

EVENT 6, 180 DEGREES, MICROPHONE 150 METERS EAST

1/3 OCTAVE HAND US LEVEL (AVE OVER 19 SECONDS)
(DB RE 20 MICRO PA)

		(DB R	E 20 M	ICHO PA			
	ENERGY			ARITH.	STD		
BAND	AVERAGE	MAX	MIN	AVERAGE	DEV		
1.4	64.3	65+1	62.7	64.2	•6		
14 15	64.3	67·5	64.2	65 • 5	•8		
16	65•6 59•0	60.8	56.9	58.9	1.0		
17	63.4	64.9	60 • 4	63.3	1.0		
18	70 • 5	71.8	69.0	70 • 5	•7		
19	82 • 6	83.5	81.3	82.5	•6	270° (Microphone Relative to	
20	64.2	66.8	60.8	63.8	1.8		
21	63 • 1	64.7	61.7	63.0	•8	Minnophone	
22	71 • 0	72.7	68 • 7	70.9	1 • 1	THICKOPHONE	•
23	65.2	66.7	63.7	65.1	• 7	Polotive to	ł
		72.0	68 • 1	70 - 1	• 9	Chaining 10	
24	70 • 2	70.1	63 • 7	67.5	1.6		
25	67 • B	70.6	63.9	67.3	1.9		
26	67 • 7	67.8	62.3	64.8	1.3		
27	65 • 0		60.0	63 • 1	1.3		
28	63 • 3	65.3	59+1	61 • 8	1.2		
29	61 - 9	63.9		60 - 8	1.4		
30	61 • 1	63.3	57.7		1 • 3		
31	59.7	61.7	55.8		1.2		
32	56 • O	58.0	52 • 9	52 • 4	1.2		
33	52.5	54.1	49.4	50.9	1.2		
34	51 •0	52.9	49 • 1		1.0		
35	49.2	51.4	47.4				
36	48 • 8	50.7	46.3		1 • 2		
37	47.4	49.0	45.3		1 • 1		
38	45 • 6	47.2	45.0		•6		
39	45 • 0	45.1	45.0		•0		
40	45 • 0	45.0	45 • 0		•0		
DBA	71.7	72.9	70.2		•8		
DBD	78 • 1	78.9	77 • 0		• 5		
OASPL	83 • 6	84.3	82.6		•5		
PNL	85•6	86.5	84.6	85.6	•6		

85.6

84.6

86.5

PNLT

85.6

5 FOOT HOVER TEST

1/3 OCTAVE NOISE LEVEL FREQUENCY SPECTRA

BELL 47 G

OCTOBER 5. 1976

EVENT 7, 885 DEGREES, MICROPHONE 150 METERS EAST

1/3 OCTAVE BAND VS LEVEL (AVE OVER 19 SECONDS)
(DB RE 20 MICRO PA)

		OB R	E 20 MI	CRO PA)		
	ENERGY	44 A V	MIN	ARITH.	STD Dev	
BAND	AVERAGE	MAX	MIN	AURANAUR	254	
14	65 • 9	66•7	65.2	65 • 9	•4	
15	66 • 7	67 • 7	65.2	66 • 6	•6	
16	60.9	68.0	59.0	60•8	8•	
17	65 • 5	67.2	64.5	65 • 4	•8	
18	72.1	73.5	71.0	72.0	•6	
19	83 • 6	84.3	82.5	83.6	•5	<i>ఎస్ట</i> ్
20	64.2	65.3	62.8	64.1	•9	· · ·
21	64 • 4	67.7	61.5	64.2	1.3	1 several montion
22	70.9	73.0	68 • 6	70 • 7	1 - 1	Microphone Botallon
23	70 • 7	73 • 1	67.5	70 • 5	1.2	Moletin + Halisanton
24	76.9	78.7	74.4	76.8	1.8	2250 (Microphone Location Relative to Helicopter
25	71.3	72.8	69.4	71.2	•9	
26	69.8	71.3	66 • 7	69•7	1 • 1	
27	69.2	71.5	66 • 7	69•0	1.8	
28	67.5	70 • 4	64.6	67 • 1	1 - 7	
29	65.0	67.4	61.2	64.7	1.6	
30	63 • 3	65.8	60 • 5	63 • 1	1 • 3	
31	68.8	65.3	59 • 8	61.9	1.4	•
32	58.9	60.8	57.0	58.8	1 - 0	
33	55.0	56.2	52+8	55.0	•8	
34	51 • 4	52.7	49.3	51.3	-8	
35	47.5	49 - 1	45 + 8	47.4	• 8	
36	45.7	47.3	45 )	45.6	•6	
37	45 - 1	45 - 6	45.0	45.0	• 1	
38	45.0	45.0	45.0	45.0	•0	
39	45.0	45.0	45.0		•0	
40	45.0	45+0	45.0		•0	
DBA	74.9	76.6	73.5		•9	
DBD	81.0	82-1	79.6		•6	
OASPL	85.4	86 • 3	84.5	85-3	o 4	
(IND) H		00.1	97 0	gg.n	•6	

88.0

88.0

87.0

87.0

89-1

89.1

0.88

88.û

PNL

**PNLT** 

•6

. 6

# TABLE C-YIL

#### 5 FOOT HOVER TEST

#### 1/3 OCTAVE NOISE LEVEL FREQUENCY SPECTRA

#### BELL 47 G

OCTOBER 5, 1976

### EVENT 8, 270 DEGREES, MICROPHONE 150 METERS EAST

# 1/3 OCTAVE BAND US LEVEL (AVE OVER 19 SECONDS) (DB RE 20 MICRO PA)

	ENERGY			ARITH.	STD	
BAND	AVERAGE	MAX	MIN	AVERAGE	DEV	
14	67 • 6	68 • l	67.0	67•6	•3	
15	66 • 9	67.8	65•5	66•9	•6	
16	60 • 7	61.7	59•3	60 • 7	•6	
17	65 • 2	67.6	61.6	65•0	1 - 4	
18	69 • 1	71 • 7	67.1	69•0	1 - 1	180°
19	77.4	81.6	69.6	76 • 4	3•2	1 60
20	62 • 1	65 • 1	57•7	61.7	2.0	(10 1 - 1 - 1
21	69 • 1	71.3	66.4	68•9	1.3	180° (Microphone Local Relative to Helico
22	82.2	84.5	79 - 1	82.0	1 - 5	Dalet + Halian
23	70 • 6	73.3	65•7	70 - 1	1.9	Kelalive 10 Malico
24	76 • 9	80.9	67.7	75 • 5	4.0	
25	76 • 3	79+3	69:4	75 - 7	2.4	
26	74 • 4	78 - 1	68 • 3	73 • 7	2.5	
27	73.9	76.6	68.0	73 • 5	2.0	
28	70•3	73 - 1	64.0	69.8	2.2	
29	66 • 7	69,2	62.8	66.5	1.5	
30	65 • 8	68.8	61.3		1.8	
31	64.6	67.9	58 • <b>7</b>	64.2	1 • 9	
32	68.0	63 • 8	57 • 4	61 - 8	1 • 6	
33	58 • 5	60 • 9	53.0	58.2	1.7	
34	55 • 5	57 • 1	50 • 1	55•2	1.8	
35	52 • 6	55•5	46.8	52.0	2.4	
36	50 • <b>7</b>	53.2	45 • 8	50.2	2.4	
37	46 • 1	50 • 6	45.0	47.8	1.8	
38	45 • 6	46.7	45.0	45.6	•6	
39	45.0	45.0	45.0	45.0	•0	
40	45.0	45.0	45.0	45.0	•0	
DBA	78.0	80.6	74.3	77.8	1.5	
DBD	83.7	85.6	81.4	83.5	1.2	
OASPL	86.0	87.6	84.2	85.9	1.0	

92.2 88.3 90.4

90.4

88.3

92.2

90 • 5

90 • 5

PNL PNLT

# TABLE C-VII. 5 FOOT HOVER TEST

#### 1/3 OCTAVE NOISE LEVEL FREQUENCY SPECTRA

BELL 47 G

OCTOBER 5, 1976

#### EVENT 9, 315 DEGREES, MICROPHONE 150 METERS EAST

# 1/3 OCTAVE BAND VS LEVEL (AVE OVER 19 SECONDS) (DB RE 20 MICRO PA)

	ENERGY			ARITH.	STD	
BAND	AVERAGE	MAX	MIN	AVERAGE	DEV	
14	67•7	68•2	66•8	67•7	•3	•
15	67.5	68.4	66.9	67.5	• 4	
16	60 • 9	62 - 1	59.7	60.9	•5	
17	64.9	67.9	62.7	64.6	1 + 4	
18	67.5	68.2	66 • 6		• 4	/3 <i>5</i> °
19	79.4	80.4	78.2		•6	, 55
20	59.4	60.3	58 • 8		• 4	135° (Microphone Location Relative to Helicopter)
21	65.5	66.4	63 • 4		•8	Microphone Localion
22	76.3	77.9		76 - 1	1.2	
23	70.6	71.7	69.3		• 7	Relative to Helicoples
24	78.5	79.5	77.3		•6	
25	73.6	72.5	67.8	70 • 4	1.4	
26	72.4	75.4	68+9		1.8	
27	72.1	74.8	66.7		2.0	
28	69.2	72.3	65 • 5		1.8	
29	66.8	70.6	62.5		2.0	
30	65.2	69.0	61.6		2-1	
31	63.9	67.6	60+5		2.2	
32	60.4	63.7	56+4		2.3	
33	56.3	59.8			1.8	
34	54.2	58.3	50 • 9	-	2.0	
35	50 • 3	52.8	46.9		1.6	
36	48.1	50 • 7	46.2		1.2	
37	46.0	48 - 1	45.0		•8	
38	45 - 1	45.7	45.0		•2	
39	45.0	45.0	45.0		•0	
40	45.0	45+0	45.0		•0	
DBA	76.5	78 • 8	75 • 0		1.0	
DBD	91.4	92.9	90 • 5		•6	
UL.U	2 A V =					

C4.3

89.1

89.1

**.** 7

- 7

OASPL

PNL

PNLT

84.3

89.1

89.1

85 • 1

90.8

90.8

83.7

88.0

88.0

5 FOOT HOVER TEST

### 1/3 OCTAVE NOISE LEVEL FREQUENCY SPECTRA

BELL 47 G

OCTOBER 5, 1976

EVENT 8, 270 DEGREES,

MICROPHONE 75 METERS EAST

1/3 OCTAVE BAND VS LEVEL (AVE OVER 19 SECONDS)
(DB RE 20 MICRO, PA)

					*****
	ENERGY			ARITH.	afa
BAND	AVERAGE	MAX	MIN	AVERAGE	DEV
14	73.9	74.5	73.5	73.9	•2
15	72.1	72.9	70 • 7	72.0	• 5
16	66 • 6	67.5	65 • 4	66.5	• 6
17	70.3	71.9	66.8	70.2	1.2
18	76.2	78.2	74.4	76 - 1	• 9
19	83.2	87.5	76 • 1	82.2	3 - 1
20	66 • 7	69.6	62.4	66.2	2.1
21	74.9	76.6	72.4	74.8	1 • 1
22	88.0	89.7	84.4	87.8	1 • 4
23	77.0	79.3	72.1	76•6	2.0
24	83 • 4	87.2	73.3	81.8	4.2
25	62 • 5	85.2	75.8	82.0	2.2
26	79.9	83.0	75•6	79.6	1.8
27	80 • 9	82.9	77.5	80.7	1 - 4
28	77 • 4	79.8	72.7	77.1	1.7
29	74.7	77.3	72.1	74.5	1.3
30	74.0	76•7	71 • 4	73.8	1 • 4
31	73 • 2	75 • 6	69.5	73.0	1.5
32	70 • 5	73 • 1	67 • 6	70 • 4	1.3
33	66•7	69.3	64 • 4	66.5	1.3
34	64 • 7	67.9	61 • 1	64.4	1.7
35	63.2	66.3	58•0	62 <b>.7</b>	2.2
36	62.4	66.5	55•6	61-6	2.7
37	60 • 4	64.9	55•0	59•8	2.3
38	58•0	61.5	54 • 1	57.5	2.0
39	55 • 1	57.6	51.2	54.8	1 • 6
40	50 • 3	52.3	47.4	50.2	1.2
DBA	85 • 0	86.3	82•6	84.9	1.0
DBD	90 • 3	91.8	88 • 2	90•2	1.0
OASPL	92.3	93.5	90•7	92.3	• 9
PNL	97•7	98.9	95•7	97.6	1.0
PNLT	97 • 7	98.9	95•7	97.6	1.0

Microphone Location
Relative to Helicopter

# TABLE C-III

#### 5 FOOT HOJER TEST

#### 1/3 OCTAVE NOISE LEVEL FREQUENCY SPECTRA

BELL 47 G

OCTOBER 5, 1976

EVENT 9, 315 DEGREES,

PNI.

PNLI

96.9

96.9

98.2

98.2

95.2

95.2

96.9

96.9

• 8

MICROPHONE 75 METERS EAST

1/3 OCTAVE BAND VS LEVEL (AVE OVER 19 SECONDS)
(DB RE 20 MICRO PA)

	ENERGY			ARITH.	STD	
BAND	AVERAGE	MAX	MIN	AVERAGE	DEV	
14	74.2	74.6	73.1	74 • 1	•3	
15	72 • 3	73.2	71.5	72.3	<b>+</b> 5	
16	66 • 2	66.9	65 • 3	66.2	• 3	•
17	69.5	71.8	67 • 4	69.4	1.0	
18	74.2	75.1	73 • 3	74.2	- 4	135° (Microphone Local Relative to Helic
19	84.9	85.3	84.1	84.9	•5	, , ,
20	64.3	64.9	63.2	64.3	• 4	Minroudone lines
21	71 .8	73.3	70.3	71.8	•8	/ /// Clophone 200
88	82 • 4	84.3	79.9	82.3	1.2	Polotic + Halin
23	77.6	78.8	76.2	77.5	-8	KEIDLING 10 HELLO
24	85 • 4	86+8	83 • 7	85.3	• 9	
25	77 • 1	78.8	74.0	76.9	1.3	
26	78.7	80 • 4	74.7	78 • 4	1 - 7	
27	78.9	81.7	73.7	78 • 4	5.5	
28	77.0	79.5	73.7	76•7	1 •8	
53	75.4	78.2	72.1	75 - 1	1.5	
30	73.7	76 • 1	71.0	73.5	1.2	
31	72.2	74.8	70.2	72.1	1 - 1	
38	68 • 6	71.5	66.5	68 • 4	1.2	
33 `	64.6	66•3	62 • 6	64.5	1 - 1	
34	64.3	67.5	60 • 3	64.0	1 • 6	
35	68.9	67.0	58 • 8	62.4	1.9	
36	61.5	64.8	57.4	61.2	1 • 8	
37	59.9	62.1	56.3	59•6	1 • 6	
38	57 • 5	60-5	54.3	<b>57 ∙</b> 3	1 • 4	
39	55.0	57.7	52.3	54.9	1 • 1	
40	51.7	53.9	49.6	51.5	1 • 1	
DBA	83.9	86.0	81.8	83.7	1 • 1	
DBD	88.9	90 • 6	87.3	83.9	• 9	
OASPL	91.0	92 • 1	89.9	9100	۰6	

## TABLE C-VIII 500 FOOT HOVER TEST

#### 1/3 OCTAVE NOISE LEVEL FREQUENCY SPECTRA

BELL 47 G

PNLT 90.6 92.7 88.1 90.3

OCTOBER 5, 1976

EVENT 16, 180 DEGREES, MICROPHONE 150 METERS WEST

1/3 OCTAVE BAND VS LEVEL (AVE OVER 19 SECONDS)
(DB RE 20 MICRO PA)

	ENERGY			ARITH.	STD	
BAND	AVERAGE	MAX	MIN	AVERAGE	DEV	
14	69•6	71.3	62•3	69•3	1.9	
15	68 - 1	71.1	58 • 2	67.6	2 • 4	
16	61 • 7	64 • 1	55 • 4		2.2	
17	64 • 1	66.5	57 • 7		2-1	90*
18	68 • 8	70 • 5	62.2	68 • 6	1.6	
19	74.0	79.2	63.9	72.0	4.0	Microphone Location
20	60 • 0	61.4	25.4		5.8	( a 1 th the Hallington)
21	67.2	70.2	58•0		3 • 4	90° (Microphone Location Relative to Helicopter)
88	72.2	75.0	62.0		3 • 7	
23	72.9	76 - 1	57.0	70 • 6	5 • 6	
24	74 • 0	76.6	62.5	72.7	4.0	
25	68•0	69.5	62.0	67.8	1 • 5	
26	<b>75•</b> 5	78.5	72•2	71.4	14.3	
27	71 • 6	75 • 1	29.2	68•9	8 • 1	
28	70•5	73.0	57.5	68+9	4 • 8	
29	69 • 2	72.2	52.0	66.7	6.5	
30	67.1	69.2	47.0	63.8	7.9	
31	66 • 0	68 • 1	44.3	62.7	7.8	
32	67 • 3	69.7	45.3	63•8	8.3	
33	65 • 7	68.0	47.3	62 • 6	7.6	
34	64.9	67.4	45.3	61.6	7 • 8	
35	62 • 1	64.4	43.0	59-1	7 • 4	
36	59•3	62.3	28.7	55•9	8 • 3	
3 <b>7</b>	54 • 8	57.3	39.8	53.0	5 + 1	
38	334.2	345.4	45.0	78•6	88 <b>•7</b>	
39	43 • 8	45.1	38.7	43 • 6	1 + 5	
40	40 • 7	45.0	33.2	39•4	3.2	
DBA	78.3	80.8	62.8	76 • 4	5 • 3	
DBD	83.0	85.2	69.3	81.6	4.5	
OASPL	83-1	84.7	75 • 5	82•7	2.1	
PNL	90•5	92.7	88•1	90•2	1.5	

## TABLE C-VII

500 FOOT HOVER TEST

#### 1/3 OCTAVE NOISE LEVEL FREQUENCY SPECTRA

BELL 47 G

OCTOBER 5, 1976

EVENT 16.180 DEGREES, MICROPHONE 150 METERS EAST

1/3 OCTAVE BAND US LEVEL (AVE OVER 19 SECONDS) (DB RE 20 MICRO PA)

		ENERGY			ARITH.	STD	
	ED A NID	AVERAGE	MAX	MIN	AVERAGE	DEV	
	BAND	AVERAGE	MHA	1/1 I 14	AVERNOD	DLIV	
	14	68 • 9	72.3	65 • 4	68.7	1.5	
	15	65 • B	70.6	57 - 6	64.3	3 ∙ 8	
	16	61 • 4	64.9	56.5	60.7	2.4	
	17	64-1	67 • 4	59.2	63.5	2.4	270°
	18	65 • 3	67.3	61.0	65.0	1 • 7	
	19	70 • 8	73.1	67.3	70 • 5	1.7	Missophone bacation
	20	56 • 5	58 • 4	53∙€	56 • 4	1.0	270° (Microphone Location Relative to Helicopter)
	21	61 • 1	64.4	58.2	60 • 8	1 • 5	Relative + Helippoter
	22	66.5	67.5	64.0		• 9	Metaline 19 Meticobiet
	83	68.5	70.3	65.2		1 • 4	
	24	72.3	73.5	70.3		1.0	
	25	60 • 5	63 • 1	57.8		1 - 4	
	26	68 • 0	60.0	66+7		<del>-</del> 6	
	27	65 • 1	66 • 8	63.3		• 9	
	28	65 • 3	66.2	63.8		•6	
	29 20	63.9	64.9	62 • 4		• 7	
	30	63.7	65 • 3	61.6		• 9	
	31	64 • 3	66.7	61 • 4		1.2	
	32	62 • 9	64 • 4	57.9		1 • 6	
•		62 • 2	63 • 7	58.0		1.4	
	33	61 • 2	63.9	57.5		1.5	
	34	58 • 2	60 • 0	54.1		1.5	
	35		57 • 1	51 • 1		1.6	
٠	36	55 • 5	53.0	45.5		2.0	
	37	50 • 8		39.2		2.0	
	38	44.7	47 • 3	35.0		1.5	
	39	37.8	40 • 7			•0	
	40	35.0	35.0	35.0		•9	
•	DPA	73 • 4	74.8	71.3		1.0	
	DBD	88 • 8	90 • 1	86 • 3			
٠	OASPL	79.0	80 • 3	77.0		1.0	
٠, ِ	PNL	86 • 1	87 • 6	83 • 6		1.0	

83 • 6 86 • 0

87.6

86.1

**PNLT** 

1.0

#### TABLE C-VIL

500 FOOT HOVER TEST

#### 1/3 OCTAVE NOISE LEVEL FREQUENCY SPECTRA

BELL 47 G

**UCTURER** 5, 1976

#### EVENT 16, 180 DEGREES, CENTERLINE MICROPHONE ( SOFT SITE )

## 1/3 OCTAVE BAND VS LEVEL (AVE OVER 19 SECONDS: OB RE 20 MICRO PA)

BAND	ENERGY	24.6.14		ARITH.	STD
DHMD	AVERAGE	MAX	MIN	AVERAGE	DEV
14	62 • 4	66 • 8	55•8	61.2	3.4
15	63.9	68 • 6	57.7	63 • 2	2.6
16	61.9	64.6	58 • 3	61.7	1.5
17	64 - 4	67.0	60.0	64.0	1.9
18	62.2	64.8	58 • 0	61.9	1.7
19	60 • 9	63.9	57.3	60 • 5	1.9
20	67.0	70 - 1	63.7	66.5	2.0
21	70 • 6	72.7	67.2	70+4	1 . 4
55	76.6	77.8	75.3	76 • 6	• 7
23	64.2	66 • 3	62.2	64.0	1 - 1
24	68•9	71.7	66•6	68 • 7	1.2
25	73 • 4	74.8	72.2	73 • 3	• 7
26	70.2	71.4	68 • 1	70 - 1	• 9
27	69•3	71.5	67.3	69.2	1.2
28	68 • 9	70•9	66.8	68.7	1.4
29	€8•3	71 - 1	66.2	68 • 1	1.3
30	66 • 6	69.3	64.3	66 • 4	1.2
31	66.2	68 • 1	63.7	66 • 1	1 - 1
32	65•6	66 • 9	63.5	65.5	1.0
33	64.8	66•3	62 • 6	64.7	1 • 1
34	64-2	66.4	62.2	64 • 1	1.0
35	61.2	64.5	58.6	61.0	1 • 4
36	58•9	61.7	56 • 2	58 • <b>6</b>	1.5
37	55•9	59•4	52.9	55•5	1.7
38	51.0	53•3	47.8	50.7	1.5
39	44.8	47.5	40.8	44.6	1.6
40	35•6	37•2	35.0	35.6	• 6
DBA	76 • 9	78•2	75.3	76.8	• 7
DBD	82.2	83•5	81.0	82.2	• 7
OASPL	81 • 9	88.88	80.9	81.9	• 5
PNL	89•4	91.0	87.9	89.3	•8
PNLT	89•4	91.0	87.9	89.3	-8

( Helicopter Located )
Directly Overhead )

# Halicopten Noise Level Data Bell 47 G. October 5,1876

MAX RMS Noise Level - JBA NR QOMPa

			MAX VIIIS	140154 540	24 -	- JUH ME QU	
HELICOPTER	RUN		MICAO	PHONE		MICROP	HONE
OPERATION	NUMBER	- 1	OFFSET TO			OFFSET TO	THE EAST
	7.0,000		150M	75 M		75 M	150M
5Ft.	2		7.5.3	77-8		84.8	77.5
HOVER		1	ا سم برد	79.8	i	84.3	76.0
0°	10		74.5	0°) '	<u> </u>	(9)	7°)
SFt.	3		75.0	82.0		80-3	73.6
HOVER					1	-07	
45°	11		75.0 (ad	59 82.3		79.3	5°) <sup>72.0</sup>
5Ft.	<i></i>		76.5	8-2-3		77.0	70.8
1 _ :	4		76.5	0 4 5			,
HOVER	12		79.3(18	P) 85.8		77.0 (	50) 69.8
			1/8		<del> </del>		
5 Ft.	5		82.3	87.8		77.5	70.3
HOVER	.,,	1	~			266.	
1350	14		82.5(13	5°) 88.8		78.8 (3,	5.07 2.5
5FŁ			75.0	<i>83</i> .3		80.3	73.0
HOVER	6	[	, , ,	<i>y</i> 3.3		1	
		1	(0	-01		(20	(00
1800			(9	7)	1	(0)	00)
5Ft	7		71-3	76.8		24.8	77.3
HOVER	1	l	•		1		1
2250	ļ		(4	5°)		(a.	(5°)
5 Ft		1			$\top$	86.3	8-0.0
1	1 8	į .	69.0	74.8		1.5	""
HOVER		1	1	<u>ل</u> ا	}		1
270°		<u> </u>	(0	/		(/:	80°)
5Ft.	9		65.0	75-3		85.5	79.3
HOVER	1	1		, ,			1
3150			(3/	50)		(13	5°)
500Ft	11	1	42	89.8 4	7	80.57	76.8
HOVER	16		\$2.0	77.0	}	1	
/80°			(90°)				(270°)
	<del> </del>	+			+-		
5001€	17		75.3	91.0		82.34	81.8
HOVER	· ·		(00)				(180°)
270°	1	4	(0°)	<b></b>		1	(100)

or microphone At centerline

## TABLE C-VIII Halicopter Noise Level Data

BELL 476

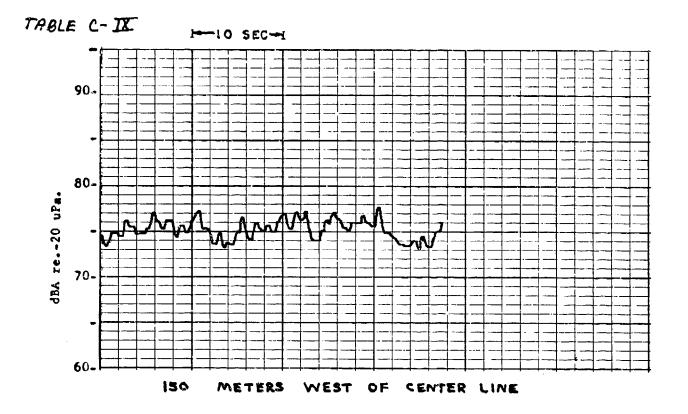
OCTOBER 5, 1976

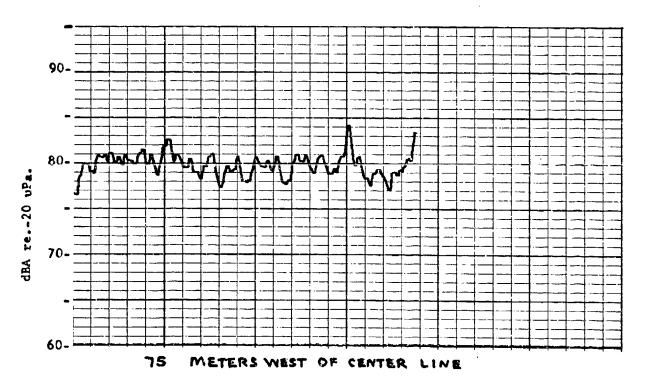
			Noise Lavel		n Pa
Heli copter Operatign	RUN NUMBER	150M	THE WEST	OFFSET TO	THE EAST
		OVER Existing Surface	Plywood	OVER Existing	OVER EXIST
SLOPE 3.				JULTACE	
6° GLIDE	19	76.5	78.0	79.0	73.5
SLOPE	20	77.0	77.0	79.0	743
J20/2	21	75.8	77.8	80.8	74.0
9.	4)	73.3	77.0	78.5	75.3
GLIDE	42	76.5	78.8	80.8	_
SLOPE	43	74.8	74.8	77.0	75.8 74.5
GO MPH LEVE L FLY OVER	26	75./	75.2	77.3	74.3
G8MPH LEVEL	28	75.3	77.0	79.0	760
FLYOVER	29	27.5	79.0	80.0	77.0
75 MPH	30	75.3	76.0	76.5	74.0
LEVEL FLY OVER	31	76.5	77.8	78.8	75.0
PLY OVED I					

## TABLE C-VIIL Helicopter Noise Level Data

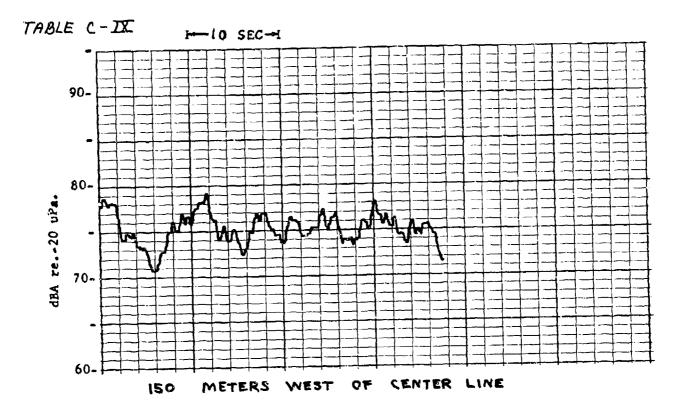
BELL 47G OCTOBER 5, 1976

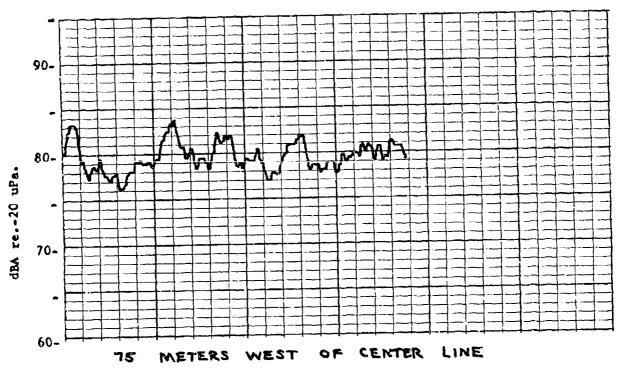
HELI COPTER OPERATION	RUN NUMBER	OFFSET TO	THE WEST	OFFSET. TO	/ // ~ / <b>/</b> E
ST WOH TENET PTAONER	36	76.3	77.5	79.0	77.0
LEVEL FLY OVER					
LEVEL FLY OVER					
LEVEL FLYOVER					
LEVEL FLYOVE	,				
LEVEL.					





NOISE LEVEL TIME HISTORIES
BELL 47-6 HELICOPTER
90° HOVER - 5 FT.

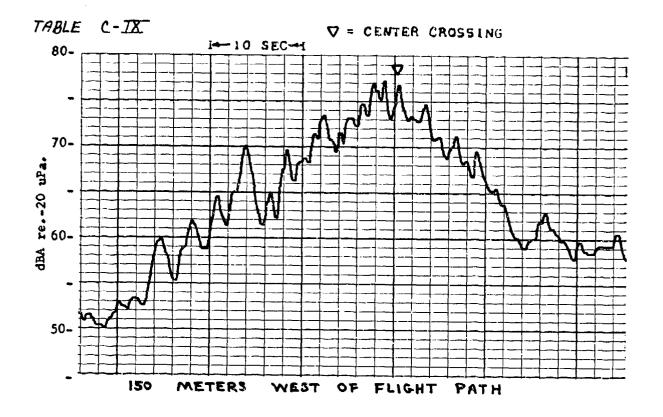


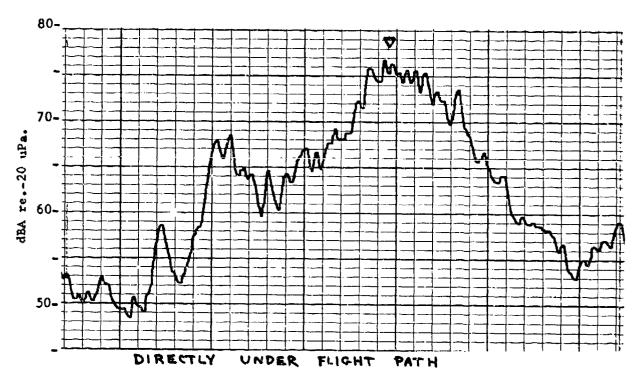


NOISE LEVEL TIME HISTORIES

BELL 47 - G HELICOPTER

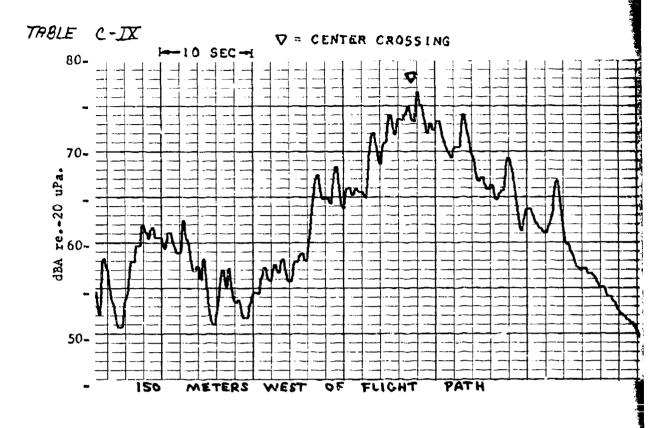
180° HOVER - 5 FT.

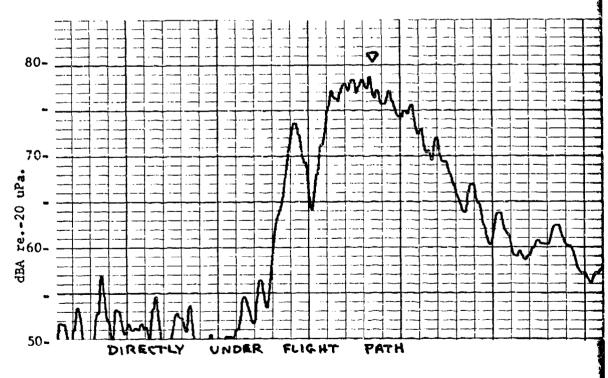




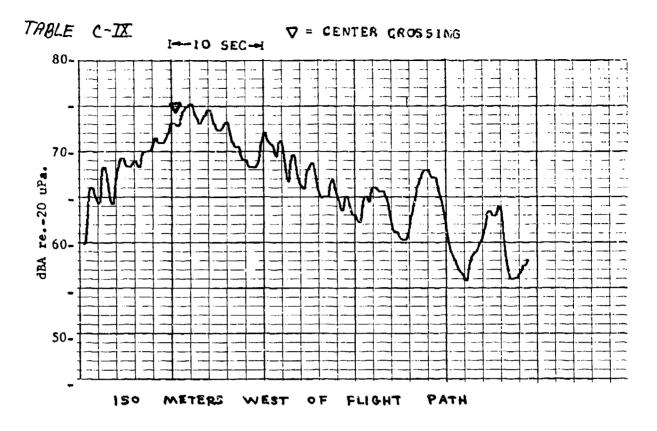
NOISE LEVEL TIME HISTORIES
BELL 47 - G HELICOPTER
6° APPROACH

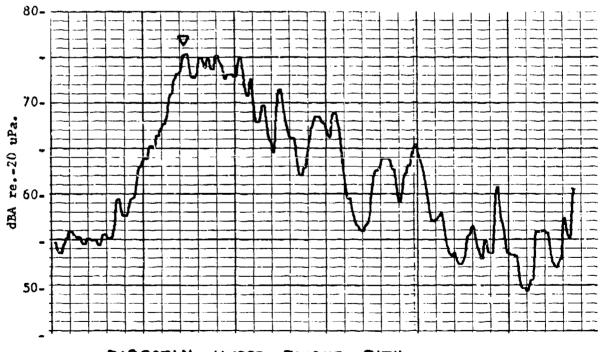
ないろ べい





NOISE LEVEL TIME HISTORIES
BELL 47 - G HELICOPTER
9° APPROACH

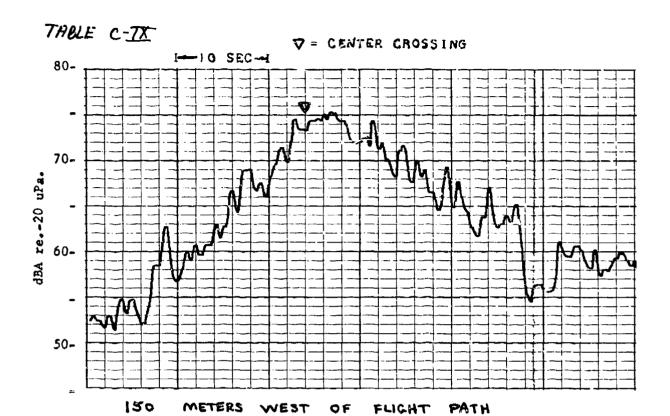


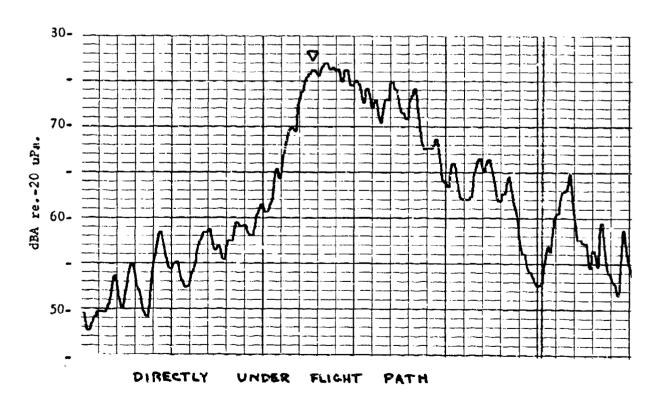


DIRECTLY UNDER FLIGHT PATH

NOISE LEVEL TIME HISTORIES BELL 47-G HELICOPTER

LEVEL FLYOVER - GO MPH

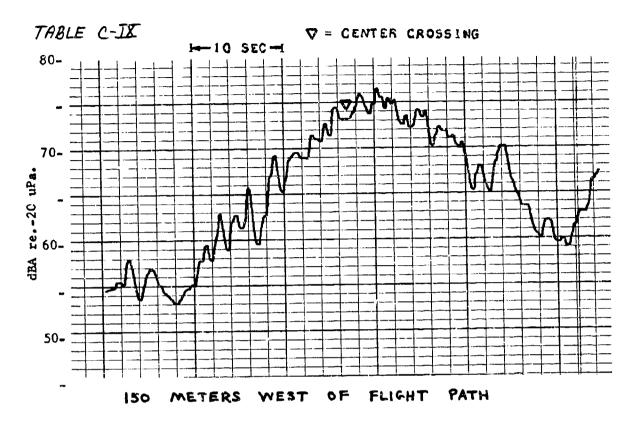


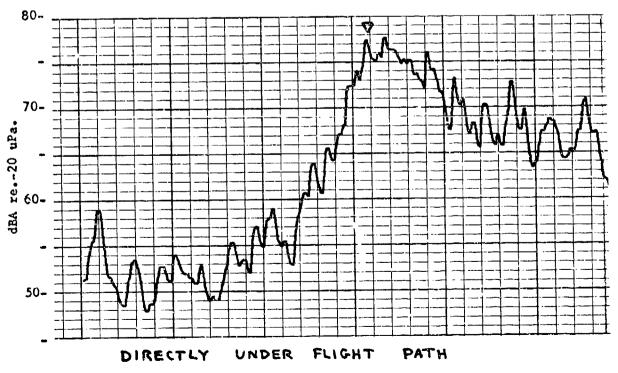


NOISE LEVEL TIME HISTORIES

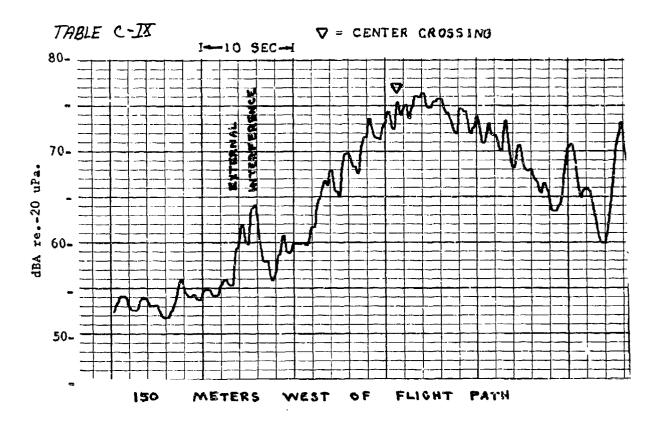
BELL 47-G HELICOPTER

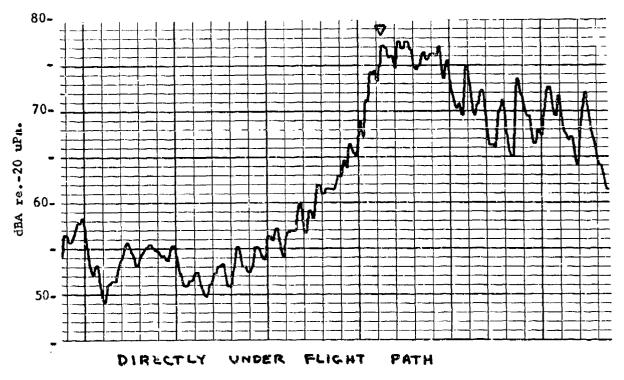
LEVEL FLYOVER - 68 MPH





NOISE LEVEL TIME HISTORIES BELL 47-6 HELICOPTER LEVEL FLYOVER - 75 MPH





NOISE LEVEL TIME HISTORIES

BELL 47 - G HELICOFTER

LEVEL FLYOVER - 82 MPH

### DATA TABLE D

#### BELL 206L

TEST DATE:	10-14-76 TEST SITE: DULLES	AIRPORT
SECTION - D	CONTENT	PACE #
I	RUN LIST	295
II	GROUND AND FLIGHT LOG DATA	298
III	METEOROLOGICAL DATA	300
IV	LEVEL FLYOVER AND APPROACH NOISE DATA	301
v	TIME HISTORIES	303
VI	1/3-OCTAVE BAND SPECTRAFLYOVER AND APPROACH	326
VII	1/3-OCTAVE BAND SPECTRA5 FOOT HOVER	349
VIII	MAXIMUM dBA NOISE LEVEL (ALL RUNS)	368
IX	SELECTED dBA TIME HISTORIESGRAPHIC PLOTS	371

THE NOISE LEVELS PRESENTED IN SECTIONS IV, V AND VI
HAVE BEEN TABULATED FOR THE SELECTED RUNS AND MICROPHONE
LOCATIONS INDICATED ON THE FOLLOWING PAGE.

TABLE D-I
LIST OF RUNS SELECTED FOR ANALYSIS

		•	MICROPHONE LOCATION					
RUN#			WES	T	EA	ST		
	TEST CONDITIO	)N	150 m SIDELINE	CENTER LINE	CENTER LINE	150m SIDELINE		
46	6° Approach	70 mph			x			
54	9° Approach	70 mph			х			
59	Level Flyover	70 mph			x			
60					x			
61		4			х			
63		206 mph			x			
65					x			
66		lacksquare			x			
67		118 mph			x			
68					x			
69					x	1		
70		V			x			
71		130 mph	х		x	x		
72			х		x	x		
73		1	х		х	х		
74		145 mph			х			
76	V	<b>V</b>			x			
	Microphone Loca	tions	Over Transpo Site Surface	Over Plywood	Over Transp Site Surfac	Over Trans		
			296					

#### GENERAL COMMENTS

- o No data was taken for the 3° approach condition.
- o Weather conditions were very windy with gusts in the 15-20 mph range.
- o Because of the high wind conditions the microphone gains were improperly set too high. (They were set to record the very low frequency peak levels of the wind noise rather than the helicopter noise.) As a result the lower limit of the dynamic range of the data recording system was not low enough to include the 10dB down points necessary to calculate the Effective Perceived Noise Levels (EPNL) for most of the runs.

Doto
4
Flight
ono
Ground
D-11
TR8LE

Test Date: Oct. 14,19%		Сомменъ				Slightly High	Abort  Dent Because of	Mort Constions it Morth of C. Seath overhead	West of Q. Abort
	(% %)	U.Jind Directions							
	78.48.5	ي و ت							
>		ex							
• •	Ground	Temp							
		0.47				5/*			
<u>:</u>		RPIN		ĝ		999			>
Nomb		Alt. tude		<del>'</del> υ		48 S.	004	905	450 of 4
Registration Number:	Conditions	Dro or Torque		% % % % % % % % % % % % % % % % % % %	25-80	15%	11 8	2 2 2 3	ω = α γ.
Regis	. oo	ع بها		0	<del></del>	300 eph. m.	1 63 0	>	300 / 300 /
	Actual	Speed		0	<del></del>	20 4	83 0		<u>,</u> • 00 →
		Heading	Conditions.	12	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	Conditions.	13	12 12 12 0 0 0 4	·/)>
7		48 B		88.0 89.0 89.0 89.0 85.0 85.0 85.0 85.0	88.00 4.00 4.00 4.00 5.00 7.40 7.40 7.40 7.40 7.40 7.40 7.40 7	# # # # # # # # # # # # # # # # # # #	1 % 1	78.0	78.55 78.05 78.05 78.05
Be// 206	200	AH;tude	at Hover	\$ ·	<del></del>	# #	→ §		\$ -→ <u>*</u>
Be//	Conditions	Velanty	Tested	0		Tosted 70mph	<b>→</b> ∘		4
Helicopter Madel:	Tamet		ე <i>00</i> % \$.	Hover		000 co 4 co 7 co 6	→ <del>1</del>		id d
:opter		Time	Hughes	9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9	9:25 9:25.5 9:25.5 9:26	Hughes 10:32	6:30 6:30	75:34 76:34 76:36	6:38 14:01
Heliu		Run	£/-/	£ 10 10 10 10 10 10 10 10 10 10 10 10 10	9 48 62 48 AS	\$ 298		रे के वह है	हिन्न

Doto
607
F1:947
Pue
G round
17-C
TABLE

	Test Date: Oct. 14,19%		Comments			2 100 ft low Slightly Eest of Q	Abort (Concord Flyht)		D € 18	Slightly West of E		Abort	
	Ìń	0 44)	Wind Direction										
Doto		Westher (10ft)	Spaed										
607			RH										
and Flight Log Data		Ground	Temp			~							
, or ,			0.97	. <del></del>		55°F							
G round,	50r;		КРМ			8						<del>-</del>	
<b>હ</b>	Number:	٦S	Attrock over mins		26.7.	400 ft. 460 530	#oas			480 54 500 510 500	560 Ft 580 500	550 4; 520 500	
I-a	Registration	Conditions	To or		down	30% 50 35	50%	& 3 ———	9 0	3383	% ~~;	8	
J-ABLE	Regis	getus/ C	Rate of		, o	0 ->	0 -		<u>_</u>	o	0>	0>	
μ.		Act	Air Speed	n	4 641	3 2 %	/00/	9 3	90/	115 mp.	/30.ph /30 /36	140 mby	
			Heading	Conditions	ま	101 1≥10	10) -		<del></del>	157	107	100>	
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	// <b>a</b> 30(	Ş.	Alt.tode	at 9° Approseh	byties o	\$ →	\$ 200		<u>_</u>	<b>8</b> →	\$ →	0g) →→	
	8	Cond, tions	Velocity	Tested	ds/s 43	% →	/de uph			% d t	130 mpt	145 m	
	Helicopter Model: Bell 206	Torast	}	2 00E 8	for Lunch	1,000 June	Level Flyover		-1	hevel Typier	1 618/	Less!	
	copter	•	Time	Hughes	Break	100 mg/mg/mg/mg/mg/mg/mg/mg/mg/mg/mg/mg/mg/m	7:03	7.00	80:/	7. 12. 12. 12. 12. 12. 12. 12. 12. 12. 12	7.26 7.26 7.26	7:30 7:31 7:32	
	He/,		Ron	25-28		\$ 9.5	3	33	'B' 3	0800	828	885	

TABLE D-III

## METEOROLOGICAL DATA DUI.LES INTERNATIONAL AIRPORT OCTOBER 14, 1976

TIME	TEMP.	BAR.	REL.	WIND	WIND	REMARKS
(Hours)	(°F)	PRESS. (mm Hg)	HUM. (%)	SPEED (mph)	DIRECTION (Degrees)	
0845	52		38	6–10	310	
0900	53	757	37	6-12	320	Sky-Clear
0915	54		36	10-12	310	
0930	54		34	8-14	310	
0945	55		34	6-16	315	
1000	55		34	7-18	330	
1015	55		34	10-22	320	
1030	56		34	12-15	310	
1045	56		34	12-21	320	
1100	56		34	3-20	330	
1115	56		34	1018	330	
1130	56		34	8-15	320	
1145	57		34	8-15	310	
1200	58		33	10-23	310	
<b>12</b> 15	57		33	8-16	320	
1230	57		32	10-18	320	•
1245	58		32	10-18	330	
1300	59		32	12-15	340	
1315	59		31	10-14	320	
1330	<b>6</b> 0		30	10-13	290	

## TABLE D-IV

## HELICOPTER APPROACH AND FLYOVER NOISE DATA

BELL 206 L

OCTOBER 28 1976

## MICROPHONE OFFSET 150 METERS WEST (LEVELS-DB RE 20 MICRO PA)

EVENT	EPNL	DBA(M)	DBD(M)	OASPL	PNL(M)	PNLT(M)	LEØ	DUR (A)	DUR (P)	TC
<b></b>		76.5	80 - /t	86.5	89.3	89•3 91•1 87•5	72.0	10.0		1 . 2

## MICROPHONE OFFSET 150 METERS EAST (LEVELS-DB RE 20 MICRO PA)

EVENT	EPNL	DBA (M)	DBD(M)	UASPL	PNL(M)	PNLT(M)	re3	DUR (A)	DUR(P)	TC
70		71.9	76.4	82.6	85.9	86•8 85•9 87•6	67.2	28 • 0		• 0

--- INSUFFICIENT DATA - 10DB DOWN POINTS NOT DISCERNIBLE ABOVE AMBIENT LEVELS

TABLE D-IV

#### HELICOPTER APPROACH AND FLYOVER NOISE DATA

BELL 206 L

OCTOBER 28 1976

## CENTERLINE MICROPHONE ( SOFT SITE ) (LEVELS-DB RE 20 MICRO PA)

EVENT	EPNL	DBA(M)	DBD(W)	OASPL	PNL(M)	PNLT(M)	LEG	DUR(A)	DURCPO	TC
46	89.0	76.4	80.9	83.6	87.9	87.9	72.3	28.0	30.5	٠٥
54	87.8	75•7	80.8	85·7	87.5	87.5	71.1	25.5	27.0	• 0
59		78.7	83.1	86.9	91 • 4	91 • 4	71.8	28.5		• 0
60		76.3	81.3	84.5	89.8	89.8	71.2	18.0		•0
61		<b>7</b> 8•8	84.1	87.0	91.9	91.9	74.4	26.0	<b>~</b>	• 0
63		76.8	81.4	84.0	89•9	89.9	70.5	18.5		• 0
65		75.1	80.9	85.0	89 - 1	89.1	71.0	16.0		• 0
66		73.4	79.5	82.9	87.7	87.7	69.7	18.0		• Q
67	89.9	82.2	86.9	90.2	95.0	95.0	75.4	11.0	12.0	• 0
<b>6</b> 8		72-8	79.2	ხ3• <del>6</del>	87•5	86.8	65.9	24.0		1 • 3
69		77.2	83.2	85.2	90•5	90 • 5	72.4	10.0		•0
<b>7</b> 0		75.9	81.5	83.8	88.9	88.9	72.0	9.0		•0
71		75 • 4	&C • 8	84.4	88 • 8	89.1	70.5	25.5		1.8
72		74.3	73.6	83.5	88 • 1	88 • 1	70.7	19.5		1 • 7
73	***	76.3	81.8	83.8	89 • 6	89.6	71.2	16.0		•0
74		76 • 1	81.9	86 • 4	89.7	89.7	71.3	18.5		•0
76	89.7	76.5	81.3	86.5	89•6	91 • 3	72.3	15.5	55.0	1.7

<sup>---</sup> INSUFFICIENT DATA - 10DB DOWN POINTS NOT DISCERNIBLE ABOVE AMBIENT LEVELS

NO DATA REDUCTIONS - CENTERLINE MICROPHONE ( HARD SITE )

#### THELE D-Y

#### NOISE LEVEL TIME HISTORY DATA

BELL 206 L

OCTOBER 14 1976

#### EVENT 71, 130 MPH FLY BY, MIC. 150 METERS WEST

INT	DBA	DBD	OASPL	PNL	PNLT	PNL-DBA	DBD-DBA
1	61.2	71.0	76.3	81.8	81.8	20•6	9.8
2	62.6	72.0	77.6	82.3	82•3	19.7	9.4
3	63 • 8	73.0	79.0	82.8	82•8	19.0	9.2
4	65.0	73.9	80.3	83•3	83•3	18.3	8.9
5	65.6	74.3		83•6		18.0	8.7
6	65•7 65•4		Q 1 /ı	a 2 - a	92.9	18.1	8 • <b>7</b>
7	65 • 4	74.0	61-4	83.6	83.6	18.2	8•6
8	66.7	74.5	81.7	83 • 8	85.2	17.1	7.8
9	68.5	75-2	82.0	84.4	85 • 4		6.7
10	68 • 6	75 • 5	82•0 82•2	84.7	85.7	16.1	6.9
11	67.8	75.3	82.5	84.8	84•8	17.0	7.5
12	70.6	77.2	82.5 83.2 84.0	86+1	87.2	15.5	6•6
13	73.9	79.4	84.0	87.9	89•3	14.0	5.5
14	73.9	79•3	83•8 83•6	87.9	89 • 2 88 • 3	14.0	5 • 4
15	72 • B	78.4	83.6	87.2			5.6
16	69.9	76 • 7	83 • 4				6 • 8
17	69.9	76.5	83•4 83•2	85•4 85•1	85•4	15.5	6.6
18	69.3	76.1	83.2	85•1		15.8	6 • 8
19	69.7	75•9			85.0	15+3	6.2
20	69.6	75.7	82•8 82•9	84•8 85•3	84•8 86•7	15.2	6 • 1
21	70.6	76 • 1	82.9	85•3			5.5
22	70.8	76.2	83.0	85•3			5 • 4
23	72 • 8 74 • 7	77.6	34•0 84•2	86•1 87•2	86 • 1 57 • 2	13.3	4.8
24	74.7	79 • 1	84.2		67.2	12.5	4 • 4
25	13.6	19.3	83.7	87•6	87•6	12.4	
O.H. →26	74•7 74•8	79.3	82•6 82•5	87.2	37.2	12.5	4.6
27	74.8	79.5	82•5	87.5	8 <b>7.</b> 5		4 • 7
28	74.8	79.7	83 • 1	87.8	87.8	13.0	4.9
. 29	74.1	79•0	83 • 1 82 • 8 81 • 7	87.4	87•4	13.3	
30	72.1	77.4	81.7	85•9	85.9	<b>13•</b> 8	
31	<b>7</b> 0 4	75.6	80 • 1	84 - 1	84•1 83•5	13.7	5•2
, 32	69•6		<b>78•</b> 8	83•5			
; 33	68 • 1	73.7	77.8	82•9	82.9		
34	67 • 4	73.4	77•2 76•5	82•7	82 <b>.7</b> 82 <b>.</b> 8	15.3	6•0
35	67•9	73.4	76.5	82 • 8	82•8	14.9	
36	67 • 8		76.0	82•7	84-1		
37	67 • 7	73.1	75 • 2	82.6	83•8 82•4	14.9	
38	66•6	72.7	75 • 4	82.7 82.6 82.4 82.1	82.4	15-8	
39	65 • 2			82 • 1	82.1	16.9	
40	63.8	71.2	73•7			17.9	
41	62.7	70.6	72.0				
42	62.9	70.8	71.2	81 • 1	81.1	18.2	7.9

#### TABLE D-I

#### NOISE LEVEL TIME HISTORY DATA

BELL 206 L

OCTOBER 14 1976

#### EVENT 72. 130 MPH FLY BY. MIC. 150 METERS WEST

INT	DBA	DBD	OASPL	PNL	PNLT	PNL-DBA	DBD-DBA
1	65.2	73.7	81.3	83•2	83•2	18.0	8 • 5
2	65 • 1	74.0	81.5	83.3	83.3	18.2	8 • 9
3	65.2	74.9	82 • 4	83.9	83.9	18.7	9.7
4	66 • 1	75.5	82.8	84.7	84.7	18.6	9 • 4
5	68+0	76.4	83.5	85.7	85.7	17.7	8 • 4
6	71.0	77.4	83.9	86.5	87.6	15.5	6 • 4
7	71.5	77.7	84-1	86.5	87.7	15-0	6 - 2
8	71 • 4	77 • 4	84.2	86.4	87.4	15.0	6.0
9	70 • 4	76.9	84.0	85.9	85.9	15.5	6.5
10	71 - 1	77.0	84.1	86.0	86.0	14.9	5•9
11	73.5	78.5	84.6	87 • 1	87.1	13.6	5•0
12	74.7	79.1	85.3	88.0	89+3	13-3	4.4
13	76.2	80.2	86.2	89.3	91.1	13.1	4.0
14	75•7	80.0	86.5	89.3	91.1	13.6	4.3
15	74.6	79.4	85.9	88.5	89.8	13.9	4.8
16	71.9	77.7	84.6	86 • 4	87.8	14.5	5 • 8
17	70.0	76.1	83.0	84.7	86.8	14.7	6 • 1
18	70•5	76.1	82.3	84.8	86.0	14.3	5•6
19	72.8	77.7	83.6	86•9	86.9	14+1	4 • 9
20	75.0	79.1	84.4	88•4	88•4	13-4	4 • 1
21	76•5	30 • 4	84.8	89.0	89.0	12.5	3.9
55	76.1	80 • 1	83.8	88•5	88.5	12.4	4.0
OH → 23	74.7	79.1	82.5	87.1	87.1	12.4	4 • 4
24	72.6	77 • 6	81 • 4	85•9	85.9	13.3	5•0
25	72.8	77.5	81.3	85 • 8	85•8	13.0	4.7
26	72.8	77.5	81 • 4	85.8	85.8	13.0	4.7
27	72.1	76.9	81 • 4	85+3	85•3	13-2	4.8
28	70.9	75.8	81.3	84.4	84.4	13.5	4.9
29	70•2	75•3	81.8	84.3	84.3	14-1	5 • 1
30	69.7	74.9	81 • 7	84.0	84.0	14.3	5•2
31	69.7	75.0	80.8	83.9	83.9	14.2	5•3
32	69.4	74.7	79•8	<b>83.5</b>	83.5	14-1	5 • 3
33	69 • 1	74.3	78•6	83.3	83.3	14.2	5•2
34	67.7	73.6	80.0	83 • 1	83.1	15.4	5•9
35	66.3	72.8	79.4	82.7	82.7	16.4	6 • 5
36	64.6	72.1	79.0	82.3	82.3	17.7	7 • 5
37	63.4	71.4	77.4	81.7	81.7	18.3	8.0
38	63 • 1	71 + 3	77•5	81.7	81.7	18.6	8 • 8

TABLE D-Y

#### NCISE LEVEL TIME HISTORY DATA

BELL 206 L

OCTOBER 14 1976

#### EVENT 73, 130 MPH FLY BY, MIC . 150 METERS WEST

INT	DBA	DBD	OASPL	PNL	PNLT	PNL-DBA	DBD-DBA
1	60 • 3	70 • 3	73 • 4	81.2	81.2	20.9	10.0
3	60 • 3	70 • 3	72.9	81 • 1	81.1	20.8	10.0
5	60 • 7	70 • 7	75•6	81.8	81.8	21.1	10.0
7	65∙მ	73-9	79 - 8	83+3	83.3	18-1	8 • 7
9	65 • 4	73.7	79 • 1	83.2	83.2	17.8	8 • 3
11	65-1	74.0	79•9	83+3	83.3	18.2	8•9
13	65.8	74 • 4	80.7	83.6	83.6	17.8	8•6
15	64•6	72.7	78 • 3	82.9	82.9	18.3	8 • 1
17	62.8	72.0	77.0	82 • 3	82.3	19-5	9.2
19	62.6	71.9	77 • 7	82 • 3	82.3	19.7	9•3
21	62•3	72.0	78•3	82.3	82.3	20.0	9.7
23	62.9	72.8	79.2	82.7	82.7	19.8	9.9
25	65•9	74.5	81.0	83.5	83.5	17.6	8 • 6
27	66+9	75.4	82.5	84.2	84.2	17.3	8.5
29	65.9	74.7	82.5	83 • 7	83.7	17.8	8.8
31	69.3	75.6	83 • 1	84.7	84.7	15.4	6•3
33	70.3	76.2	83 • 4	85.5	85 • 5	15.2	5•9
35	70 • 4	76.2	82•6	85.2	85 • 2	14.8	5.8
OH -→37	73.3	78•2	83 • 4	86.2	86 • 2	12.9	4.9
39	74.5	79.1	82.5	87.5	87.5	13.0	4.6
41	74.3	78.9	81 • 6	87 - 4	87.4	13.1	4.6
43	72.4	77.0	79.4	85.7	85 • 7	13.3	4.6
45	70.5	75.0	77.5	83.6	83 • 6	13.1	4.5
47	68.7	73.7	75.9	83.0	83.0	14.3	5.0
49	68.0	73.0	74.4	82.5	83.9	14.5	5.0
51	65 • 5	71.9	72.0	81 . 7	81 • 7	16.2	6 • 4
53	63.6	71.3	71.0	81 • 2	81.2	17.6	7.7
55	63 • 1	70 • 8	70 • 8	81 • 0	81.0	17.9	7.7
57	62 • 8	70 • 7	70 • 4	81 - 1	81 • 1	18.3	7.9
59	62.6	70 • 4	70.2	81 • 1	81 • 1	18•5	7 • 8

#### TABLE D-WT NOISE LEVEL TIME HISTORY DATA

BELL 206 L

OCTOBER 14 1976

EVENT 71. 130 MPH FLY BY. MIC. 150 METERS EAST

INT	DBA	DBD	OASPL	PNL	PNLT	PNL-DBA	DBD-DBA
3	57.9	66.6	67.5	80.7	80.7	22.8	8 • <b>7</b>
5	57.3	66.8	68•6	80.7	80.7	23.4	9•5
7	57.3	66.8	70.0	80.7	80.7	23.4	9•5
9	57.5	66.1	67.3	80.7	80.7	23.2	8 • 6
11	57•3	66.8	70 • 7	80.7	80.7	23.2	8•7
13	57.9	66.3	71 • 8	80.7	80.7	55.8	8 - 4
15	57.8	66.3	70-0	80.7	80.7	28.9	8 • 5
17	57.5	66.2	67 • 4	80.7	80 • 7	23.2	5 • 7
19	57.7	66.7	69.6	80.8	80.8	23.1	9.0
21	58.3	67.5	72.0	81.0	81.0	22.7	9.2
23	60.2	69.4	76.2	81.8	81.8	21.6	9.2
25	63.1	72.1	79.0	82.8	82.8	19.7	9.0
27	60.9	69.7	77 • 4	81.9	81.9	21.0	8 • 8
29	58.7	67.9	76-1	81.2	81.2	22.5	9.2
31	59 • 1	68.5	76.0	81.5	81.5	22.4	9.4
33	59.9	68.8	77-0	81.7	81.7	21.5	8.9
35	64.0	72.7	81.0	83.1	83.1	19/1	8 • 7
37	68.6	76.7	85 • 4	85.5	85.5	1/2-9	8-1
39	66.3	73.2	82.2	83.6	83 • 6	17.3	6.9
41	65.0	73.9	82.2	83.8	83.8	18.8	8.9
43	67.8	75.6	84.1	85 • 1	85.1	17.3	7.8
45	71 • 1	77.3	84.8	86.6	86.6	15.5	
46	71.6	77.5	84.5	86.8	86.8	15.2	6+2 5+9
48	68.7	75 - 1	82.8	84.7	84.7	16.0	5•9 6•4
50	68.2	73.7	81.0	83.6	83+6	15+4	5 • 5
52	71.3	75.4	81.1	84.8	86.0	13.5	4.1
54	71.3	75.3	79.9	84.5	84.5	13.2	4.0
56	72.5	76.4	80.9	85.0	85.0	12.4	
aH. → 58	73.4	77.2	82.4	85.8	85.8	12.4	3.8
60	72.2	76.4	81.2	84.7	84.7	12.5	3 • 8 4 • 2
68	70.6	74.7	78.3	83.6	83.8	13.0	
64	69•1	72.9	76.7	82-8	82.8	13.7	4•1 3•8
66	66.9	71.5	76.2	82.1	82.1	15.2	
86	68•6	69.0	73 - 1	81.2	81.2	18.6	4.6
70	62.5	68 • 8	74.2	81.1	83.1	18.6	6.4
72	61.3	68.2	73.7	81 - 1	81.1	19•8	6+3
74	60.3	67.5	78.0	80.8	80 · 8	20.5	ó•9 7•₽
	-		, 50	3446	0U • Ø	20 • 5	7•9

#### TABLE D-I

#### NOISE LEVEL TIME HISTORY DATA

BELL SO6 L

OCTOBER 14 1976

#### EVENT 72, 130 MPH FLY BY, MIC. 150 METERS EAST

INT	DBA	DBD	OASPL	PNL	PNLT	PNL-DBA	DBD-DBA
1	53 • 4	62 • 4				22.8	9•0
3	58 • 1	67.0	73.2	80.8	80 • 8	22.7	8•9
5	59.5	68 • 0 67 • 5 66 • 7	73 • 4	81 • 1	81 • 1	21.6 22.3	8•5
7	58 • 6	67 • 5	74.1	6.03	80.9	22.3	8•9
9	57.7	66.7	73-8	80 • '.	80•7	23.0	9•0
11	57•7	66.3	72.6	80.7	·30 • 7	83.0	8•6
13	57•9 58•9 58•8	66 • 3	71-2	80•7	80 <b>- 7</b>	23.0 22.8 22.0	8 • 4
15	58 • Y	66 • 9	73.0	80•9	80+9	28.0	8•0
17	58.8	67.0	73.4	81.O	81.O	يزمير	8.4
	59.0	67 • 6	74.5	81 • 1	81 • 1	8 3-1	8 • 6
21	59•6	68 - 1	74.9	81.4	81.4	8.13	8 • 5
23	62.3	70 • 4	77.4	82.2	82.2	21.8 19.9 19.1	8 - 1
25	63 • 3	71.0	79•2	82 • 4	82-4	19.1	7 • 7
27	60.9	69.7	79•4 78•9 79•4	81.9	81.9	21.0 19.6	8 • 8
29	62 • 7 63 • 0	71.0	78•9	82.3	88+3	19.6	8 • 3
31	63.0	71.5	79•4	82.5	82 - 5	19.5	8 • 5
33	61.3	70 - 1	78.9	82 • 1	82.1	80.8	8 • 8
35	64.3	72 • 8	80 +8	83 • 1	83 • 1	18.6	8 • 3 5 • 8
37	69 • 6	75 • 4	80 •8 82 • 6 82 • 4	84.9	84.9	15.3	5.8
39	66.7	74.3	82.4	84.0	84.0	17.3	7.6
41	67 • 6	73-8	81 • 3 81 • 9 82 • 4 80 • 0	83 • 6	83.6	16.0	6+2
43	68 • 9	<b>75.0</b>	81+9	84-4	84.4	15.5	6 • 1 5 • 2
45	71 • 1 69 • 1	76.3	88 - 4	85.9	85•9	14.8	2.5
47	69 - 1	74.2	80.0	84.1	84.1	15.0	5 • 1
49	69.4	73.9	78 • 8	83.6	83.6	14.5	4•5 4•5 4•6
51	71 • 1 71 • 8 71 • 5	75.6	80 • î 81 • 2	84.6	84.6	13.5	4+5
OH 53 > 54	71.8	76.4	81.2	85.4	85.4	13.6	4.0
oH <del>53</del> → 54	71+5	75.8	80.5	84.3	84.3	12.0	4.3
57	69 • 8 68 • 1 66 • 7	74.4	79.8	83-5	83.5	13.7 15.0 16.2	4.•0 E O
59	68+1	73.3	81.0	83.1	83.1	15.0	3.5
61	66.7	78.7	62+0	66.3	62.9	10.2	6.0
<b>83</b>	64.5	71-4	71.5	6. 6	81.8	17.0	7.0
65	05.0	70.4	\$1.0	01.0	01.0	19.2	7.0
67	60.9	70 • 4 69 • 6 68 • 5	81 • 1	01.4	81.4	17.8 19.2 20.5 21.2	0 • <i>1</i>
69	60.0	66.9	76 • 7 90 · 0	01 + 5	01.4	50.8 E1.2	8 • O
71	60 -3	60.0	80 B	01+1	01.0	20.8 20.4 20.5 19.3	# · O
73	61.0	67 · U	00.0	01.5	01.5	20 • 4 20 - E	g.s
75	01.0	60.0	70.8	01.0	61.0	10-3	7.4
77	62.5	68.E	77•8 77•7	01.0	03•1 01.A	50.8	7.9
79	60•6	68•5	* * * *	01+4	01-4	2V . 0	1 • 7

TABLE D-Y

#### NOISE LEVEL TIME HISTORY DATA

BELL 206 L

OCTOBER 14 1976

#### EVENT 73, 130 MPH FLY BY, MIC . 150 METERS EAST

ĪŇŢ	DBA	DBD	OASPL	PNL	PNLT	PNL-DBA	DBD-DBA
1	53.7	61.9	65.9	76.3	76•3	22.6	8.8
4	57.6	66 • 4	70.5	80.7	80.7	23 • 1	8 • 8
7	58.4	67.3	74.8	80.9	80.9	22.5	8.9
10	58•7	66.9	72.0	80.8	80.8	22 - 1	8 • 2
13	57 • 4	66 • 1	70 • 8	80.7	80.7	23.3	8.7
16	58.3	67 • 3	72.8	80.9	80.9	22.6	9.0
19	58.7	66.9	71.9	80.9	80.9	22.2	8.2
88	58.3	66 • 8	72 • 1	80.9	80.9	82.6	8.5
25	62.2	71.2	79+2	82•6	82.6	20.4	9.0
28	63.4	70.6	77 - 1	82.2	82.2	18 - 8	7 <b>₽</b> 8
31	58.9	67 • 8	74.7	81.2	81.2	22.3	8.9
34	58.9	68.0	74.1	81.3	81 • 3	22.4	9-1
37	62 - 1	70 • 1	77-1	82.1	82.1	20.0	0.3
40	63.5	71.3	78 • 4	82.6	83.8	19+1	7.8
43	60 - 1	70.5	77.6	82.2	83 • 4	19.1	7 - 4
46	66.6	73.2	80 • 4	83.5	84+5	16.9	6 • 6
49	67.4	73.0	79.3	83.2	83.2	15.8	5•6
52	70.5	74.8	79•7	84.3	84.3	13.8	4-3
55	72.2	75.6	<b>79</b> • 3	85.0	. 86.6	12.8	3 • 4
58	72.7	76.9	62 * 1	85.3	86.4	12.6	4.2
OH <del>&gt;</del> 59	73.3	77 • 6	82.9	86 • 4	87.6	13.1	4.3
68	72.8	76.8	81 - 1	85.5	85.5	12.7	4.0
65	70.0	74.1	76.0	83.2	83.2	13.2	4-1
68	66 • 1	71.0	73.2	82.0	82.0	15.9	4.9
71	65.6	70.6	78 • 2	81.8	81.8	16.2	5.0
74	51.9	68.2	72.3	81.0	81.0	19.1	6.3
77	62.9	68.5	71.7	81.2	81.2	18.3	5•6
80	64.5	68.9	70 • 3	81 • 4	82.4	16.9	4.4
83	61.1	67.7	72.2	81.0	81.0	19.9	6 • 6
86	58.2	66.2	68•8	80.7	80.7	22.5	8.0

## TABLE D-II

NOISE LEVEL TIME HISTORY DATA

BELL 206 L

OCTOBER 14 1976

EVENT 46, 6 DEGREE APPROACH, CENTERLINE MIC. ( SOFT SITE )

INT	DBA	DBD	GASPL	PNL	PNLT	PNL-DBA	DBD-DBA
•	61.0	68.7	80.7	77.2	77.2	15.3	6.8
1	61.9	69.2	79.5	78.0	78.0	14.7	5 • 9
3	63 • 3	69.5	79.8	77.8	77.8	14.5	6.2
5	63•3 64• <del>9</del>	70 - 6	79.5	79.1	79.1	14.2	5•7
7	72.3	75.7	81.0	83.2	84.9	10.9	3 • 4
9	73.8	77.7	82.1	84.6	86.4	10.8	3.9
11	75•0	79•4	83.5	85.9	85.9	10.9	4.4
13	75•5	79.2	83.4	87 - 1	87.1	11.6	3.7
15	73.6	77.6	82.4	85.8	85 • 8	12.2	4.0
17	69.9	74.9	81.2	82.6	82.6	12.7	5.0
19	69.9	75.1	81 + 1	82•8	82.8	12.9	5.2
21	72.2	77.0	81.7	84.4	84.4	12.2	4 • 8
23	73.9	78.3	81.8	85.5	85•5	11.6	4.4
25 27	75.5	80 • 1	82.6	86.7	86•7	11.5	4.6
oH-→29	76.4	30.9	83.5	87 • 9	87•9	11+5	4.5
31	75.0	79.7	82.8	87.2	87•2	12.2	4:7
33	74.4	73.7	82.1	86.5	86•5	12.1	4.3
35	73.3	77.1	81.5	84.3	84•3	11.0	3.8
37	72.3	76.7	82.2	83.8	83•8	11.5	4.4
39	71.6	76.2	C+S8	83.6	83•6	12.0	4•6
41	70.6	75-1	80 • 7	82.5	82•5	11.9	4.5
43	70.8	75.6	80 • 4	83.2	83.2	12.4	4-8
45	70.9	75.9	80 • 1	83.8	83.8	12.9	5.0
47	69.8	74.7	78.3	82 • 1	88-1	12.3	4•9 5•3
49	69.7	75.0	78 • 4	82.3	88.3		4.7
51	69.3	74.0	77.6	81.6	81.6		3.9
53	68.0	71.9	76 • 1	80•3	80 • 3		4.1
55	68 - 2	72.3	76.0	80 • 8	62.6		3.2
* 57	68 • 3	71.5	75.4	80.5	81.8		3.5
59	68 • 3	71.8	74.8	80 <b>• 7</b>	80.7		3.5
61	68.5	72.0	74.8	80 • 3	80.3		4.0
63	65-4	69.4	73.2	78.0	78 • 0		4.0
65	62.6	66•6	71.5	75.6	75 • 6		4.3
67	60 • 7	65.0	70.8	74.2	74.2	-	6.8
69	57.3	64-1	70.2	73.5	73 • 5	10.5	Ç

### TABLE D-V

#### NOISE LEVEL TIME HISTORY DATA

BELL 206 L

OCTOBER 14 1976

#### EVENT 54, 9 DEGREE APPROACH, CENTERLINE MIC. ( SOFT SITE )

INT	DBA	DBD	OASPL	PNL	PNLT	PNL-DBA	DBD-DBA
1	57.7	65.2	75 • 4	73.9	73.9	16.2	7.5
3	57 • 4	65.5	75•7	74.0	74.0	16.6	8 - 1
5	62.0	68 • 8	78 • 4		76 • 6	14.6	6 • 8
7	65+2	71 • 1	80.6	78•9		13.7	
9	67.5	71.9	79.5	80 • 5	82.2	13-0	
11	61.5	68.5	77.9	76.9	77.9	15.4	7.0
1.3	62.6	69.6	70.2	77 - 9	77.0	15.3	7.0
15	64.8	70.7	79.0	78.9	80.0	14-1	5 • 9
17	69.1	73.5	79.0 79.7	81.5	83.1	12-4	4 • 4
19	67.9	72.5	8C • 4	80 • 2	<b>80∘2</b>	12•3	4 • 6
21	66.3	72.0	81.2	79+3	79 = 3	13.0	5•7
23	70 • 5	75 • 1	83.0	82.9	82.9	12.4	
. 25							
27	72.9	77.8	84.8	85•3	86.5	12.4	4.9
29	72.2	77.2	84 - 1	85•0	85.0	12.8 12.4 11.8	5•0
31	73.7	78 • 6	84 • 7	86 - 1	86 • 1	12.4	4.9
oH <del>33</del> → 34	75•7	80.8	85 • 3	87.5	87.5	11.8	5 • 1
35	74.7	80.0	84.9	87.4	87•4	12.7	5•3
37	75.0	80.3	85 • 6	87.2	87.2	12.2	5.3
39	75.3	80.3	85•7	87.3	87.3	12.0	
41	73.7	78 • 4	84.4	86 • 1	86 • 1	12.4	4.7
43	72.7	77-9	83 • 2 81 • 7	85 • 4	85 • 4	12.7	5•2
45	68 • 4	73 • 4	81.7	81.3	81.3	12.9	5•0
47	66.8	71.5	79•7	79•3	79•3	12.5	
	69•8	73.3	80 • 1	80•6	80.6		3 • 5
			79.7		79.7	11.2	3 • 6
			77•7				5•0
<b>5</b> 5 ·	65.2	68•9	76 • 4	77 • 8	77.8	12.6	3•7
57	65 • 0	68•3	74.8 74.1 73.7	77 - 1	78 • 6	12.1	3•3
59	60 • 1	65 • 4	74 • 1	74.2	74.2	14.1	5•3
61	60 - 1	65 • 4	73•7	74.3	74.3	14.2	
63	57.0	64 • 1	73 • 4	73 • 3	73.3	16.3	7 - 1

#### TABLE D-JZ

#### NOISE LEVEL TIME HISTORY DATA

BELL 206 L

OCTOBER 14 1976

EVENT 59, 70 MPH FLY BY, CENTERLINE MIC. ( SOFT SITE )

INT	DBA	DBD	OASPL	PNL	PNLT	PNL-DBA	DBD-DBA
1	59.3	69.5	76.2	81.3	81.3	22.0	10.2
3	60 • 6	69 • 8	75.7	81.6	81 - 6	21.0	9.2
5	65 - 7	72.4	78-5	82 • 9	82.9	17.2	6 • 7
7	69 • 1	74.2	80 • 1	83.7	83.7	14.6	5 • 1
9	65.4	72 • 1	<b>78.</b> 8	82.7	82.7	17.3	6.7
11	62 • 1	70 • 6	77.0	81 • 8	81.8	19.7	8 • 5
13	64.7	71.1	77.4	82.2	82.2	17.5	6 • 4
15	65 • 6	71.9		82.5	82.5	16.9	6•3
17	63 • 4	71.0	76.2	81.9	81.9	18.5	7.6
19	63.0	70•9	75 • 6	81.9	81.9	18.9	7.9
21	63.7	71 • 3	76.9	82.2	82.2		7.6
23	66.9	73.0	78 • 8	83.0	83.0	16.1	6 • 1
25	68•8	74.2	79.5	84.2	84.2	15.4	5•4
27	71.4	76.0	80 • 4	85.7	86•8	14.3	4.6
29	70.2	75.5	80 • 1	84.7		14.5	5•3
31	71.3	76.7	80.7	85•6	85•6		5 • 4
33	68 • 1	74.3	79.7	83•8			6.2
35	69.0	75 • 1	6.08	84.2	85•3		6 • 1
37	70.8	76 • 4	81.3	85.2		14.4	5 • 6
39	71 - 1	76.6	82.5	85.4	85.4	14.3	5.5
41	73.3	77.8	83 • 1	86.6	86•6	13.3	4.5
43	74.8	79•7	83.9	88.3	88.3	13.5	4.9
45	71.9	77.6	82.8	86.0	86•0	14.1	5.7
47	76•9	81.6	85.5	90-1	90 • 1	13.2	4 • 7
49	78 • 6	83.0	86.8	91.4	91 • 4	12.8	4.4
<b>&gt;</b> 51	76.0	81.0	85 • 8	89.3	89•3	13.3	5.0
<b>5</b> 3	73.2	78.8	84.7	86.9	86•9	13.7	5•6
55	72.9	77.9	84.0	85∙ช	85.8	12.9	5.0
57	71.3	76.8	83.8	85.6	85.6	14.3	5 • 5
59	71.2	76.5	83.7	85.6	85.6	14.4	5 • 3
61	69•5	75.3	81.7	84.2	84.8	14.7	5 • 8
63	68•7	74.7	80.7	84.1	84.1	15.4	6.0
65	67 • 5	74-1	79 • 6	83.3	83.3	15.8	6.6
67	66•6	73.2	79.3	82.9	82.9	16.3	6.6
69	65+9	72.7	79.9	82.6	83.9	16.7	6.8

#### TABLE D-II

#### NOISE LEVEL TIME HISTORY DATA

BELL 206 L

OCTOBER 14 1976

EVENT 60. 70 MPH FLY BY. CENTERLINE MIC. ( SOFT SITE )

INT	DBA	DBD	OASPL	PNL	PNLT	PNL-DBA	DBD-DBA
1	64+3	72.0	77•3	81.8	81.8	17.5	
2	63.9	71.5	75•7	81.8	81.8	17.9	7.6
3	64 • 4	71 • 4	76.0	82.0	82.0	17.6 15.9	7.0
4	66•8	73.0	77 • 4	82 <b>•7</b>	82•7	15.9 15.6 15.7 16.7 17.3 16.6 16.2 15.1 14.2 14.2 14.5 14.7	6.2
5	67.5	73 • 4	78•0	83 • 1	84.2	15.6	5•9
6	67.0	73.0	77.6	82•7	83•7	15.7	6.0
?	65 + 5	71.9	76.9	82•2	82.2	16.7	6 • 4
8	64+6	71.3	76•0	81.9	81.9	17.3	6.7
9	65 • 4	71.9	76 <sub>•</sub> 7	88.0	82.0	16.6	6•5
10	66•0	72•5	<b>77•</b> 8	82•2	83.6	16.2	6•5
11	67·6	73.6	79•3	82•7	84•4	15.1	6•0
15	69•2	74.9	80.0	83•4	83•4	14.2	5•7
13	70.0	75 • 4	80.2	84.2	84.2	14.2	5 • 4
14	69.9	75•3	80 • 1	84•4	84.4	14.5	5 • 4
15	69 • 4	75.2	79•8	84 • 1	84+1	14.7	5+8
16	69•0	75•2	79•4	83•7	83.7	14.7	6.2
17	69.7	75•4	79•5	83•9	83•9	14.2 14.3 13.5	5•7
18	70 • 0	75•5	80.3	84.3	84•3	14.3	5.5
19	71 = 9	76.8	81.8	85•4	85 • 4	13.5	4.9
20	73.3	78•5	82 • 4	87.3	87•3	14.0 13.8 13.6	5•2
21	75 • 4	80.3	83.9	89•2	89 • 2	13.8	4.9
22	76.2	81 • 3	84.5	89.8	89•8	13+6	5 • 1
oH <del>→ 2</del> 3	76+3	81.3	84•3	89•6	89-6	13.3	5.0
24	75 • 4	80 • 8	83 • 3	88•7	88•7	13.3 13.3 13.3	5 • 4
25	73.8	79•4	82.2	87.1	87-1	13.3	5 • 6
26	72.3	78•3	81 • 4	86,4	86 • 4	14·1 14·6 14·0	6•0
27	71 • 5	77.9	81.2	86+1	86 • 1	14.6	6 • 4
28	72.4	78 • 4	81 - 1	86 • 4	86•4	14.0	6•0
29	72.7	78 • 3	80 • 9	86 • 4	86 • 4	13.7	<b>5 •</b> 6
30	72.0	77.2	79.5	85•6	85.6	13.7 13.6 13.3	5•2
31	70.9	75.7	77.8	84.2	84.2	13.3	4 • 8
32	70.2	74.9	76•8	83 - 6	83.6	13.4 13.3 13.3	4•7
33	70 - 2	74.8	76•9	83.5	83 • 5	13.3	4 • 6
34	70 • 4	75 • 1	77 • 7	83 • 7	83.7	13.3	4 • 7
35	<b>70 •</b> 0	74.8	77 • 8	83 • 6	83.6	13+6	4 • 8
36	69.7	74.4	77 • 9	83 • 5	83 • 5	13.6 13.8 14.4	4.7
37	68.8	73.6	77 • 1	83 • 2	83.2	14.4	4 • 8
38	67.7	72.8	76 • 4	82 • 7	82.7	15.0 16.0 16.5	5 • 1
39	66-1	72 • 1	75.7	82 • 1	82.1	16.0	6.0
40	65+4	71.8	75 • 8	81.9	81.9	16.5	6 • 4
41	64.6	71.2	75 • 4	81.7	81.7	17.1	6 • 6
42	64.3	71 • 1	74.8	81.6	81.6	17.3	6 • 8

#### TABLE D-Y

#### NOISE LEVEL TIME HISTORY DATA

BELL 206 L

OCTOBER 14 1976

#### EVENT 61. 70 MPH FLY BY, CENTERLINE MIC. ( SOFT SITE )

INT	DBA	DBD	OASPL	PNL	PNLT	PNL-DBA	DBD-DBA
•	60.0	<b>.</b>	76 1	<b>91</b> /	<i>a</i> 1	21.2	0.7
1	60 • 2	69•9	76 • 1	81 • 4	81•4 81•3		9•7 10•0
3	59-8	69 • 8	76+3	81.3			
5	60 • 2	69 • 8	77 • 1	81 • 4	81 • 4		9 • 6
7	70 • 3	75 • 1	79.9	84.5	84.5	14.2	4 • 8
9	70.9	75 • 5	79.5	84.8	84.8	13.9	4.6
11	64.9	71-3	76.6	82.3	82.3	17.4	6 • 4
13	60 • 6	69.7	74.6	81 • 4	81 • 4	20.8	9•1
15	62.0	70 + 4	75 • 4	81.8	81.8	19.8	8•4
17	64.2	71.6	77.0	82.3	82.3	18+1	7 • 4
19	66•9	73.2	78.5	82.8	82.8	15.9	6+3
21	69.1	74.6	79.6	84.7	84.7	15.6	5 • 5
23	70.7	75.3	80.0	85.5	86.5	14-8	4 • 6
25	67.9	73 • 9	79•4	83 • 8	83.8	15.9	6•0
27	73.9	78 • 4	81.8	87.4	87•4	13.5	4.5
29	76 • 5	80 • 9	83.8	89•3	89.3	12.8	4.4
31	76•6	80 • 5	83•8	89 • 1	89 • 1	12.5	3•9
33	77 . 8	80•9	84-1	89.5	89•5	11.7	3 • 1
35	77.2	80•6	83•6	89•6	89•6	12.4	3 • 4
37	75 • 3	79.5	82•3	88 • 1	88 • 1	12.8	4.2
39	72.8	77.0	81.5	86•7	86•7	13.9	4.2
41	75.2	80•3	83 • 6	88•7	88•7		5 • 1
43	74-3	79.8	83.7	87.9	87•9	13.6	5 • 5
OH <del>&gt;</del> 45	75•8	80•9	84.0	88•9	88•9	13.1	5 • 1
47	78.3	83.9	85.8	91 • 4	91 • 4	13.1	5•6
49	77 • 9	84.0	86.9	91 • 4	91 • 4	13.5	6 • 1
51	78•8	83.8	86∘4	91.9	91.9	13.1	5•0
53	75.3	79.9	83.3	89.0	89+0	13.7	4 • 6
55	75 • 4	80 • 4	83 • 4	89.0	89.0	13.6	5•0
57	71.2	77.2	81.3	86.2	86.2	15.0	6.0
59	67 • 4	73 • 7	79•7	83.3	83.3	15.9	6•3
61	67 • 3	73.2	79.2	83.0	83.0	15.7	5•9
63	64.7	71 • 4	76.7	82 - 1	82.1	17.4	6.7
65	61.9	70-2	75.5	81 - 4	81.4	19.5	8•3
		•	. = .				

#### TABLE D-V

#### NOISE LEVEL TIME HISTORY DATA

BELL 206 L

OCTOBER 14 1976

EVENT 63. 106 MPH FLY BY. CENTERLINE MIC. ( SOFT SITE )

INT	DBA	DBD	OASPL	PNL	PNLT	PNL-DBA	DBD-D}(A
1	61.4	70.9	76.2	82.1	82.1	20.7	9•5
2	61.9	71.0	76 • 4	82.2	82.2	20.3	9•1
3	65.7	72.4	77 • 4	82.9	84.0	17.2	6 • 7
4	67.9	73.7		83.7	85.0	15.8	5.8
5	68.4	74.0	79.5	84.0	85 • 1		5•6
6	66.9	73.2	79.4	83.6			6•3
7	64.5	72.2	78.9	82.9			
8	62.4	71.3	78.3	82.4	82.4		8.9
è	64.5	71.9	76.7	82.6	83.8		7 • 4
10	65•Q	72.2	79.0	82.7	83.7		7.2
11	64.9	72.4	79.2	82.8	82.8	17.9	7.5
15	65 • 5	73.1		83.1	83.1	17.6	7 • 6
13	67.7	74.4		84.2			6 • 7
14	68 • 1	74.7		84.5			6.6
15	67 - 1	74.0		84.0	84.0		6.9
16	64.9	72.7	79.7	82.9			7.8
17	65.0	72.4		82.7	82.7		7 • 4
18	65.3		79.4	82.7	82.7		7.0
19	65.4	72.3		82 <b>.7</b>			6.9
20	65.9	72.6	79.9	82.9			6.7
21	66.8	73.7	81 • 1	83 • 3			6.9
22	69•3	75 • I	81.8	84•4			5 • 8
23	70.9	76•5	82.5	85•7	85•7	14.8	5•6
24	71.4	76•9	82.4	85.9	85.9	14.5	5 • 5
25	70.8	76•7	81.9	85 • 3	85•3	14.5	5.9
26	72.7		88.5	86•4	86 • 4	13.7	5 • 4
27	76.8	81 • 4	84 • C	89•8	89 • 8	13.0	4.6
28	76.8	81 • 4		89•9	89.9	13.1	4.6
29	76 • 1	80.8	83.2	89•4		13.3	4.7
30	72.2	78 • 1	81.7	86•4	86 • 4	14.2	5.9
OH <del>&gt;</del> 31	72.9	78•7	82.5	86.7	86.7	13.8	5•8
32	72.6	78•7	82.8	86 • 4	86 • 4	13∙₿	6 • 1
33	73.3	79 • 1		87 • 1	87 • 1	13.8	5•8
34	71.9	77 • 6	_	85•8			5 • 7
35	70.8	76 • 2	_	84.5	84.5	13.7	5 • 4
36	68 • 4	74.0		83.1	83 • 1	14.7	5•6
37	68 • 4	74.2	78•9	83.2		14.8	5•8
38	69.0	74.7	79.1	83 - 4	83 • 4	14-4	5 • 7
39	68-2	74.2	78 • 8	83.2	83.2	15.0	6.0
40	66.9	73.3	78.3	82.8	82.8	15.9	6 - 4
41	63.6	71.5	76 • 7	81.8	81.8	18.2	7.9
42	63.5	71.2	76.2	81.8	81.8	18.3	7 • 7
43	64.5	71.8	76.8	82.0	82.0	17.5	7.3

#### TABLE D-I

#### NOISE LEVEL TIME HISTORY DATA

BELL 206 L

OCTOBER 14 1976

#### EVENT 65, 106 MPH FLY BY, CENTERLINE MIC. ( SOFT SITE )

INT	DBA	DBD	OASPL	PNL	PNLT	PNL-DBA	DBD-DBA
1	62.6	71 • 1	76.8	82.0	82.0	19.4	8•5
8	62.5	71.2	77 • 3	82.1	82 • 1	19.6	8.7
3	63.8	71.8	78 • 3	82.5	82.5	18.7	8.0
4	64.7	72.6	79 • 1	82.9	84.0	18.2	7.9
5	66.2	73 • 6	80.2	83 + 4	84.7	17.2	7.4
ó	<b>66 •</b> \$	74=2	80-9	84.0	84.0	17.2	7.4
7	66 • 5	74.2	81.3	83.9	83.9	17.4	7 • 7
8	65 • 6	73.8	81.3	83.6	83.6	18+0	8 • 2
9	65 • 5	73.5	81.2	83 • 4	83-4	17.9	8.0
10	66.7	74.0	81.3	83.6	83.6	16.9	7•3
11	67 • 6	74.6	81.7	84.0	84.0	16.4	7.0
12	68 • 1	75.0	82.5	84.5	84.5	16.4	6.9
13	69.5	75.9	83.5	85.8	87.2	16.3	6.4
14	71.0	77.0	84.0	86.7	87.9	15.7	6.0
15	72.4	78.5	84.3	87.8	87.8	15.4	6 • 1
16	74.5	80 • 6	85.0	89-1	89.1	14.6	6 • 1
17	75 - 1	80.9	85.0	89.1	89 • 1	14.0	5•8
18	74.7	80.2	84.3	88.3	88+3	13.6	5.5
19	73.8	78.6	83.3	87.5	87.5	13.7	4.8
20	74.2	78•7	83 • 1	87.9	87.9	13.7	4.5
ខរ	74.7	79.6	83.5	88 • 1	88 • 1	13-4	4.9
oH <del>&gt;</del> 22	74.2	79.5	83.3	87 • 6	87.6	13.4	5.3
23	73.2	79.0	83.2	86.7	86.7	13.5	5 • 8
24	72-1	77.8	82.5	86.2	86 • 2	14.1	5.7
25	71.3	76.8	81.9	85.5	85.5	14-2	5.5
26	71.0	76.1	81.4	84.5	84.5	13.5	5 • 1
27	70•9	76.2	81.9	84.8	84.8	13.9	5.3
28	70 • 4	75.9	81.6	84.5	84.5	14.1	5.5
29	69.0	75.0	80.8	83.6	83.6	14.6	6.0
30	67 • 9	74.1	79.0	83.2	83+2	15.3	6.2
31	68 • 1	74.2	78 • 1	83 • 4	83 • 4	15.3	6.1
32	67 • 7	74.0	77.7	83.2	83.2	15.5	6•3
33	67 • 7	73.8	78 • 4	83·Q	83.0	15.3	6.1
34	66.5	72.9	78.0	82.7	82.7	16.2	6.4
35	65.9	72.2	76.8	82.4	83 • 4	16.5	6.3
36	63.7	71.0	74 - 6	81.8	81.8	18 • 1	7.3
37	62.1	70.3	73.7	81.5	81.5	19.4	8.2
38	60 • 6	69.8	73.3	81.3	81.3	20.7	9.2

#### TABLE D-V

#### NOISE LEVEL TIME HISTORY DATA

BELL 206 L

OCTOBER 14 1976

EVENT 66. 106 MPH FLY BY. CENTERLINE MIC. ( SOFT SITE )

INT	DBA	DBD	OASPL	PNL	PNLT	PNL-DBA	DBD-DBA
1	60.5	70 • 4	75•6	81.7	81.7	21.2	9.9
ž	61.3	70.7	76.6	82.0	88.0	20.7	9.4
3	62.0	71.2	77-1	82.2	82.2	80.8	9•2
4	63.0	71.5	77.6	82.5		19.5	8.5
5	65.2	72.8	78.8	83.0	84.1		7.6
6	65.9	73.3	79.6	83 • 3	84.7		7 • 4
7	66.3	73.8	80.7	83.6		17.3	7 - 5
B	65.7	73.8	81.0	83.7	85+3	18.0	8 • 1
9	66.8	74.5	81.7	84-1	85.6		7.7
10	67.4	74.6	81.5	84.2			7.2
11	68.7	75.0	81.6	84.7			6.3
12	68.8	74.9	81 • 4	84.8	84.8	16.0	6 • 1
13	68 • 5	74.8	81.7	84.7			6.3
14	67.3	74.2	81.7	83.9	83.9	16.6	6.9
15	66 • 7	73.8	81.5	83 • 4	83 • 4	16.7	7 • 1
16	67.1	73.9		83.5	84.8		6.8
17	68•3	74.2	81 - 1	84 • 1	85.1	15.8	5.9
18	68.3	74.4	80 • 8	84.2	84.2		6 • 1
19	68 • 1	74.2		83.9			6 • 1
20	69+3	75.2	80.3	84.2	84.2	14.9	5.9
21	70 • 6	76.2		85 • 1	85.1		5•6
88	71 - 1	76 • 6		85 • 7	85.7		5.5
23	71 • 4	77.3	80 • 1	86.2		14.8	5.9
24	72.3	78.2	81.2	86.8	86.8		5.9
OH>25	73.4	79.4		87 • 7	87.7	14.3	6.0
26	73.4	79.5	82.9	87-2	87-2	13.8	6 • 1
27	72.7	78•7	82 • 4	86.7	86.7		6.0
28	71.4	77.0	81.2	85 • 4	85 • 4	14-0	5 • 6
29	70 • 6	75•9	80.2	83.9	83.9	13.3	5 • 3
30	70.3	75 • 4	79.7	83.9	83.9	13-6	5•1
31	70.0	75.2	79.5	84 - 1	84 • 1	14.1	5.2
32	70 - 1	75 • 4	0.08	84.2	84.2	14.1	5•3
33	72.7	77 • 8	82.5	86.6	86.6	13.9	5 • 1
34	72.3	77 • 6	82.2	86 • 5	86.5	14.2	5•3
35	71-2	76.6	81 • 1	85.7	85.7	14.5	5 • 4
36	67 • 8	73.8	77.7	83•4	83-4	15.6	6.0
37	67.3	73 - 1	76.8	82.9	82.9	15.6	5 • 8
38	66.2	72.5	<b>7</b> 5•7	82.5	82.5	16.3	6•3
39	63.2	70.6	72 • 4	81.5	81.5	18.3	7.4
40	62.5	70.2	72.4	ε •3	81.3	18.8	7.7
41	63.0	70.2	73.7	81 • 4	81-4	18.4	7.2
42	62 • 8	70 - 1	73.9	81 • 4	81.4	18.6	7 • 3
					· · · · ·		

#### NOISE LEVEL TIME HISTORY DATA

#### BELL 206 L

OCTOBER 14 1976

#### EVENT 67, 118 MPH FLY BY, CENTERLINE MIC. ( SOFT SITE )

# 1/2 SECOND INTEGRATION VS NOISE INDEXES (DB RE 20 MICRO PA)

INT	DBA	DBD	OASPL	PNL	PNLT	PNL-DBA	DBD-DBA
1	64 • 1	72.1	79.9	82.6	82.6	18.5	8.0
2	66 • 6	73 • 6	81.6	83 • 4	83.4	16.8	7.0
3 .	71.1	76.4	82.5	85 • 1	85 • 1	14.0	5•3
4	72.2	77 • 1	83.3	86.1	86 • 1	13.9	4.9
5	71.8	76.5	82.8	85.9	85.9	14-1	4.7
6	68 • 6	74.7	83.3	84.6	84.6	16.0	6.1
7	65 • 6	74.2	84.6	83 • 6	83.6	18.0	8 • 6
8	65 • 7	74.9	<b>65•3</b>	84+0	84-0	18+3	9.2
9	68•7	76.2	85.5	85 • 4	85 • 4	16.7	7.5
10	70.8	77.3	85.3	86 • 6	86•6	15.8	6.5
11	72.1	78.2	85.8	87.5	87.5	15-4	6.1
18	73+6	79.2	85.8	88 • 0	89.3	14.4	5 • 6
13	72.9	78•7	85.2	87.6	89.1	14.7	5.8
14	71.8	77.6	84.6	86.8	88.4	15.0	5.8
15	69.8	76 • 6	83.9	85•9	85+9	16-1	6.8
16	71.2	77.3	83.9	86 • 3	86.3	15.1	6 • 1
17	73.2	78.9	84.0	87.3	87.3	14.1	5.7
18	74.9	80•4	84.9	88 • 8	88.8	13.9	5.5
19	81.5	86.2	89.4	93•9	93.9	12.4	4.7
20	82.2	86+9	90.2	95•0	95.0	12.8	4.7
21	81.6	86.3	89.6	94.5	94.5	12.9	4.7
OH→22	76.9	82.2	85.8	91 • 1	91 • 1	14.2	5 • 3
23	73.6	79 • 1	83 • 4	87.3	87.3	13.7	5 • 5
24	72.9	78.6	83.5	86 • 8	86.8	13.9	5.7
25	71.4	76.9	83.4	85.5	85.5	14-1	5 • 5
26	70•9	76 • 1	82.5	85 • 1	85 - 1	14.2	5.2
27	70.3	75.6	82 - 4	84.7	84.7	14.4	5.3
28	69.0	.75•1	83•9	84.0	84.0	15.0	6-1

TABLE D-V

#### NOISE LEVEL TIME HISTORY DATA

#### BELL 206 L

#### OCTOBER 14 1976

#### EVENT 68, 118 MPH FLY BY, CENTERLINE MIC. ( SOFT SITE )

# 1/2 SECOND INTEGRATION VS NOISE INDEXES (DB RE 20 MICRO PA)

INT	DBA	DBD	04SPL	PNL	PNLT	PNL-DB4	DBD-DBA
3	57.7	71.0	72.4	80.8	80 • 8	23•1	13.3
5	58 • 1	71.0	72 0	90 0	an a	00.0	
7	57 - 7	70.9	73:9	80+8	80.8	23 • 1	13.2
9	58•8	71.6	74.8	81 • 4	81 - 4	22.6	12.8
11	58•9	71.6	76•7	81 • 4	81.4	22.5	12.7
13	58.3	71.3	74.3	81 • 1	81.1	22.8	13.0
15	58•4	71.5	74.2	81 • 1	81 • 1	22.7 23.1 22.6 22.5 22.8 22.7	13.1
17	60.5	72.1	76.6	81.9	81.9	21.4	11.6
19	60 • 5	72.3	78.0	32 • 1	82+1	21.6	11 .8
21	62.6	73.4	78.9	88•6	82.6	20.0	10.8
23	64.6	72.9	77.8	82.6	82.6	22.7 21.4 21.6 20.0 18.0	8.3
25	62.6	73.2	81.2	82.5	82.5	19.9	10.6
							9.3
29	65.7	75.0	82.6	83.8	83.8	18 • 1	9.3
31	63.3	73.5	81.0	82.8	82.8	19.9 17.6 18.1 19.5	10.2
33	63•4	73.9	82.6 81.0 81.1 81.0	82.9	82.9	19.5	10.5
35	65 - 1	74.0	81.0	83.3	83.3	18 • 2 15 • 8 15 • 2	8.9
37	70•3	76.6	83.0	86 • 1	86 • 1	15.8	6.3
							5.6
40	71.5	77 • 4	82.6 82.1 82.4 82.0 82.9	86.5	87.8	15.0	5.9
42	71 - 4	77.2	82 • 1	86.0	87.1	14.6	
44	71.6	77•5	82 • 4	86.5	86 • 5	14.9	5.9
46	71.7	78 • 1	82.0	86.2	86.2	14.5	6 • 4
48	72.7	79-1	82.9	87 • 4	87.4	14.5 14.7	6 • 4
oH <u>50</u> →51	72.2	78•6	82.4 81.8 80.7 81.2 79.8	86.9	86.9	14.7	6.4
52 50	71.0	77 • 5	81.8	85.5	85.5	14.5	
54	69•5	75.8	80.7	<b>83.7</b>	83.7	14.2	6.3
56	68 • 8	75•3	81 • 2	83.9	83.9	15.1	6.5
58	66 • 8	74.2	79.8	83 • 1	83 - 1	16.3	7+4
	00-2	1 L	10.1	02.0	62.0	10.4	7.9
62	66.5	74-1	79.1	ao a	80.8	1 6 0	7 • 6
64	64.9	73.2	77.0	82.2	82.2	17.3	
66	66 • 5 64 • 9 64 • 2	72•6	77.0 73.9 72.2 71.4	81.7	81.7	17+5	8 • 4
68	62•7	71.9	72.2	81.3	81.3	18-6	9,2
70	60•0	71 • 3	71 • 4	80.9	80.9	18•6 20•9	11.3
15	24.0	71 • 1	71.0	80 • 7	80.7	21 • 1	11.5
74	57.8	70 • 8	69.8	80•7	80.7		13.0

## NOISE LEVEL TIME HISTORY DATA

BELL 206 L

OCTOBER 14 1976

EVENT 69. 118 MPH FLY BY. CENTERLINE MIC. ( SOFT SITE )

1/2 SECOND INTEGRATION US NOISE INDEXES
(DB RE 20 MICRO PA)

INT	DBA	DBD	OASPL	PNL	PNLT	PNL-DBA	DBD-DBA
7	58 - 4	70.7	70 • 4	80.7	80•7	22.3	12.3
9	58•4	70.7	70.5	80.7	80 • 7	58.3	12.3
11	57.0	70.6	69.4	80.7	80.7	23.7	13.6
13	59.2	71.9	73.3	81.5	81.5	22.3	12.7
15	60 - 9	72.5	74.8	81.9	81.9	21.0	11.6
17	59-1	71.3	72.3	81.4	81.4	22.3	12.2
19	58.8	71.0	72.2	81 • 2	81.2	22.4	12.2
51	58 • 4	71.4	72.6	81.3	81.3	22.9	13.0
23	58•6	71.4	73.4	81 • 4	81.4	22.8	12.8
<b>£</b> 5	59 • 8	72.0	74.2	81.7	81.7	21.9	12.2
27	59.4	72.0	74.8	81 • 6	81.6	22.2	12.6
29	58 • 8	71.5	73.0	81.3	81.3	22.5	12.7
31	59.1	71.5	73.7	81-4	81 • 4	22.3	12.4
33	60.9	72.6	76.4	81.9	81.9	21.0	11.7
35	61.6	72.9	78•9	82 • 4	82.4	20.8	11.3
37	62.5	72.9	78.8	82.4	82.4	19.9	10.4
39	63.3	73.1	76 • 6	82.4	82 • 4	19.1	9.8
41	63.8	73.5	80 • 1	82.8	82.8	19.0	9.7
43	65.8	74.5	81.0	83.3	83 • 3	17.5	8.7
45	67.2	75 • 1	88.5	84.0	84.0	16.8	7.9
47	68.9	76.4	82 • B	85 • 1	85-1	16.2	7.5
49	69.0	75.9	81 • 4	84.7	86.4	15.7	6.9
51	66.8	74.6	80 • 4	83.5	83.5	16.7	7.8
<b>5</b> 3	74.4	79.9	82 • 6	87.8	87.8	13.4	5.5
55	77.2	83.0	84.9	90•5	90.5	13.3	5.8
OH>56	77.2	83.2	85•2	90 • 5	90.5	13.3	6.0
58 43	74.5	80.5	83.7	88.0	88.0	13.5	6.0
60	69.5	76.4	80•4	84.5	84.5	15.0	6.9
62	67.0	73.9	75•9	82•5	82.5	15.5	6.9
64	67.6	74.6	<b>76 •</b> 8	82•9	82.9	15.3	7.0
66	65.3	73.4	75•0	82.2	82.2	16.9	8 • 1
68	64.0	72.7	72•5	81.7	81.7	17.7	8.7
<b>7</b> 0	62.6	72.1	70•9	81 • 3	81.3	18 • 7	9.5
72 74	62.6	71 • 8	70 • 6	81.3	81.3	18.7	9.2
74	59-1	70 - 8	69•0	80.9	80.9	21.8	11.7
76	58.2	71.0	68.7	80.7	80.7	22.5	12.8
<b>7</b> 8	58•3	71.0	69•0	80-8	80.8	22.5	12.7
80 80	57.9	70 • 7	67.8	80•7	80 <b>.7</b>	55.8	12.8
82	57.7	70.9	67.0	80 • 7	80.7	23.0	13.2
84	58 • 1	71-1	67•9	80•7	80.7	22.6	13.0

PABLE D-V

#### NOISE LEVEL TIME HISTORY DATA

BELL 206 L

OCTOBER 14 1976

## EVENT 70, 118 MPH FLY BY, CENTERLINE MIC. ( SOFT SITE )

# 1/2 SECOND INTEGRATION VS NOISE INDEXES (DB RE 20 MICRO PA)

INT	DBA	DBD	OASPL	PNL	PNLT	PNL-DBA	DBD-DBA
4	59•0	71.3	76•4	81 • 4	81.4	22.4	12.3
7	59.7	72.0	79.0	81.4	81 - 4	21.7	12.3
10	58•9	71.5	75.0	81.3	81.3	22.4	12.6
13	58.0	71.5	75.0	81.2	81.2	23 • 2	13.5
16	59•0	71.8	76•6	81.5	81.5	22.5	12.8
19	60.0	71.8	76•3	81 • 6	81.6	21.6	11.8
<b>2</b> 2	60 • 4	72.3	79•3	82.0	82.0	21.6	11.9
25	59.2	71.5	76•3	81.6	81.6	22.4	12.3
28	59.1	71.7	76.0	81.6	81.6	22.5	12.6
31	63.3	73.5	8Û•6	82.7	82.7	19.4	10.2
34	63.0	73.3	80.0	82.7	82.7	19.7	10.3
37	62.6	72.9	77.9	82.1	82.1	19.5	10.3
40	64.8	73 • 1	78.2	82.5	82.5	17.7	8.3
43	61-4	72.7	78.8	82 • 1	82.1	20.7	11.3
46	65.2	73.6	79.9	82.7	82.7	17.5	8.4
49	66.9	74 • 4	81.2	83.2	84.9	16.3	7 • 5
52	70.0	76.6	81.1	84•9	84.9	14.9	6•6
55	74.8	80 • 1	83.0	88•3	88.3	13.5	5 • 3
OH →> 57	75•9	81.5	83.8	88 • 9	88•9	13.0	5 • 6
60	71.9	78.0	81.4	85 • 8	85.8	13.9	6 - 1
63	70 • 1	75 • 8	<b>7</b> 8•7	84.0	84.0	13.9	5•7
66	66 • 1	74 • 1	79•1,	82•8	82.8	16.7	8.0
69	64.6	73.1	75•5	82.0	0.\$8	17.4	8.5
72	64•4	72.4	73.9	81.9	81.9	17.5	8.0
<b>7</b> 5	60•0	71.0	72.1	80•9	80.9	20.9	11.0
78	59.0	71.0	72.2	8 • 08	80.8	21.8	12.0
81	60.5	71.1	71.2	81.1	81.1	20.6	10.6
84	57•9	70.8	71.8	80.8	80.8	22.9	12.9

#### NOISE LEVEL TIME HISTORY DATA

BELL 206 L

OCTOBER 14 1976

#### EVENT 71, 130 MPH FLY BY, CENTERLINE MIC. ( SOFT SITE )

# 1/2 SECOND INTEGRATION VS NOISE INDEXES (DB RE 20 M1CRO PA)

INT	DBA	DBD	OASPL	PNL	PNLT	PNL-DBA	DBD-DBA
3	57 • 1	71 - 1	75.5	80 • 9	80•9	23 • 8	14.0
5	57.0	70.8	74.6	80.9	80.9	23.9	13.8
7	57.2	<b>70.</b> 8	75.0	80.9	80.9	23.7	13.6
9	57.2	70.8	75.9	80.9	80.9	23.7	13.6
11			83•1	81.2	81.2	23.9	14.3
13		71.1			80.8	24.1	14.4
15	57.2	71.1	75.2				13.9
17	57 • 8	71.2	76.0	81 • 1	81 • 1	23 • 3	13.4
19	58•8	71.5	75.2	81 • 4	81.4	22.6	12.7
21	64.2	74.2	78.8	83.0	83.0	18.8	10-0
23	66.2	71 • 5 74 • 2 75 • 8	80.8	83.9	83•0 83•9	17.7	9.6
25	63.0	73.7	78•5	82•7	82.7	19.7	10.7
27		71 • 7			81 • 4	22.3	12.6
	60.9	72 • 5	76.5	82.0	82.0		11-6
31	62.9	73-8	79.9	82.7	82.7	19.8	
33	61.8	73•2 75•6 78•0	79.4	82.6	82•6	20.8	11.4
35	65 • 7	75 - 6	81.8	84 - 3	84.3	15.5	വര
37	70.0	78•0	84.2	86•7	86.7	16.7	8•0
39	70.3	77 <sub>°</sub> 4	83.9	86 • 4	86 • 4	16-1	7 - 1
41	<b>69.9</b>	77 • 1	83•6	85.9	85.9	16.0	7.2
43	68.0	76.0	82.8	85•1	85 • 1		8•0
45	71 - 6	77 • 6	82.7	86•7	87.7	15.1	6•0
47	72.8	78•4 79•9	83.7	87.3	89 • 1	14.5	5 • 6
49	74.2	79.9	84.4	87•3 88•3 8 <b>7•</b> 6	88•3	14.1	5•7
51	74.0		83•5	87 • 6	87.6	13.6	5•1
<b>5</b> 3	73.8	75.8	82.7	87.4	87.4	13.6	5•0
55		79.3			87 <b>.7</b>	13.6	5.2
oH 57 59 58		80.3					
59	74.3	79•8	82.7	87•7	87.7	13.4	5 • 5
61	70.7	76 • 4	80.4	84-4	84 • 4	13.7	5•7
63	68 • 1	74.4	76.8	83.0	83.0	14.9 15.6	6•3
65	67.2	74.2	75.8	82.8	82.8	15.6	7.0
67	66.9	76.4 74.4 74.2 73.6 74.0	75.7	82 • 5	82.5	15.6	6.7
69	67.0	74.0	76.4	82.5	82.5	15.5	7.0
71	65.9	73+3	74.9	82.1	83 • 7	16.2	7 • 4
73		72.5				16.5	7 • 4
<b>7</b> 5	62.5	71 • 7	70.9	81 • 1	81.1	18.6	9•2

#### NOISE LEVEL TIME HISTORY DATA

BELL 206 L

OCTOBER 14 1976

EVENT 72, 130 MPH FLY BY, CENTERLINE MIC. ( SOFT SITE )

# 1/2 SECOND INTEGRATION VS NOISE INDEXES (DB RE 20 MICRO PA)

INT	DBA	DBD	OASPL	PNL	PNLT	PNL-DBA	DBD-DBA
3	5 <b>7.7</b>	71 - 0	70 • 4	80•7	80.7	23.0	13.3
5	58 • 8	71.5	74.7	80•9	80•9	22.1	12.7
7	58∘3	70 • 8	74.3	80.8	80 • B	22.5	12.5
9	57.8	71 - 1	71.2	8 • 08	80.8	23.0	13.3
11	58 • 1	71 • 3	<b>7</b> 2•8	80.8	80 • 8	22•7	13.8
13		70.9		80.7	80•7	23 • 1	13.3
		71.3		81.1		20.7	10.9
17	61.0	71.5	<b>75•5</b>	81.3	81.3		10.5
19	59.5			81 • 1	81.1	21.6	11.9
21	61-1	71 • 4 72 • 2	76•2	81.8	81.8	20.7	11.1
23		72.9	11.9	82.5		19•6	
25		71.6		81.7	81.7	22.1	12.0
27	58•7		<b>7</b> 5•7	81.4	81 - 4	22.7	12.5
29	60.0	71 •8	77•2	81 • 6 82 • 7	81•6 82•7	21 • 6 17 • 3	11.8
31	65•4	73.9	0.08	82•7	82•7	17.3	8 • 5
33	65 • 3	74.4	81 • i	83 • 3	83.3	18.0	
35		<b>76 •</b> 2	88•8	85•2	85.2	17.9	
37		77 • 5	82.6	86•3 86•4 84•9	88 • 1		7 • 1
38	70•9	77 • 2 75 • 4	81.8	86•4	88 • 1	15.5	6 • 3
40	68 <b>-</b> 8	75 • 4	81.1	84.9	86.2		6 • 6
42	69.7	12.3	01 • /	84.8		15•1	
44	72.6	77 • 8	82.7	86.8		1.4 • 2	
46	70 • 7	77.2	83.5	86.2		15.5	6 • 5
48	73.5	78 • 4 79 • 2 79 • 6	83.2	87.1			4.9
50	74.2	79.2	83.5	87.6	87.6	13 • 4	5.0
52	74.3	79•6	83 • 1	88•i	88 • 1		5 + 3
	73.8	79•6	83.0	87.8		14.0	
56	72.8	79.0	83.3	86.9			
58	71 • 2	77•5 76•4 74•3	82.2	85 • 5	85 • 5	14.3	6 • 3
60	69.8	76 • 4	81 • 1	84.8	84.8	15.0	6 • 6
62	66 • 8	74.3	78.0	83.0	83.0	16.2	7 • 5
64	66 • 1			82.5		16.4	
66	65.0	72.9		82 • 1		17.1	
68	64 • 1	72 • 4		81.9	81.9	17.8	
70	61 •8 59 • 6	71.2	73.6	81 • 2	81.2	19.4	
72	59•6	71.3	70.8	80.9	80.9	21.3	11.7
74		70 • 9	69-9	80•8	80 • 8	22-1	
76	58.9	71.0	69.4	80.7	80•7	21.8	12.1

#### NOISE LEVEL TIME HISTORY DATA

BELL 206 L

OCTOBER 14 1976

#### EVENT 73. 130 MPH FLY BY. CENTERLINE MIC. ( SOFT SITE )

# 1/2 SECOND INTEGRATION VS NOISE INDEXES (DB RE 20 MICRO PA)

Int	DBA	ged	OASPL	PNL.	PNLT	PNL-DBA	DBD-DBA
4	<b>56</b> 0	70 9	67.0	00 <b>0</b>	<i>a</i> o		
4	56 • 9	70.8	67.2	80.7	80 • 7	23+8	13.9
7	57.4	70.9	71 • 6	80.8	80.8	23 • 4	13.5
10	56+6	70 • 7	68 • 8	80.7	80 • 7	24-1	14.1
13	57 • 7	70 - 6	71 - 1	80.7	80.7	23.0	12.9
16	58.5	71 • 3	73 • 4	80.9	80 • 9	22.4	12.8
19	57 • 4	70.9	71 - 3	80.8	80.8	23 • 4	13.5
22	58.3	71 • 1	73 • 1	81.2	81.2	85.3	12.8
25	60 • 3	72.3	74.5	81.7	81.7	21.4	12.0
28	62•7	73.2	76•7	82•3	82•3	19•6	10.5
31	64+2	74.5	79•3	83.2	83•2	19.0	10.3
34	63.1	73-1	77•3	82.6	82•6	19.5	10.0
37	62.4	72.5	75-4	32•0	82•0	19.6	10-1
40	68•5	76.5	81.3	34.7	84.7	16.2	8 • 0
43	67•5	75•7	81.5	84 • 6	84.8	17.3	8.2
46	66 • <b>6</b>	75•5	81.9	84.3	84-3	17.7	8•9
49	70.4	76.9	82.6	85.9	87.1	15.5	6 • 5
52	70.5	77.0	82.5	85.8	86.9	15.3	6 • 5
55	73.1	78.4	81 • 3	87 + 0	87.0	13+9	5•3
OH> 58	76.3	81.8	83.8	89.6	89.6	13.3	5 • 5
61	72.6	78.7	81 • 4	86 • 4	86 • 4	13.8	6 • 1
64	69.2	75.2	75•9	83.4	83.4	14.2	6.0
67	67.8	74 • 6	76.1	83 • 1	83.1	15.3	6 • 8
70	66•7	73.8	76.4	82.2	88.5	15.5	7 - 1
73	64.6	. 72 • 5	73-4	81.8	81.8	17.2	7.9
76	63.5	71.7	72.2	81.3	81.3	17.8	8.2
79	62.5	71.8	75 - 1	81 - 4	81.4	18.9	9•3
82	58.9	70 - 4	71.8	80.8	80.8	21.9	11-5
85	59+4	71-1	74-0	81.0	81.0	21.6	11.7

#### NOISE LEVEL TIME HISTORY DATA

#### BELL 206 L

OCTOBER 14 1976

#### EVENT 74, 145 MPH FLY BY, CENTERLINE MIC. ( SOFT SITE )

# 1/2 SECOND INTEGRATION VS NOISE INDEXES (DB RE 20 MICRO PA)

INT	DBA	DBD	OASPL	PNL	PNLT	PNL-DBA	DBD-DBA
3	56•9	70 • 7	68•7	80.7	80•7	23•8	13.8
5	57.1	70.9	70.2	80.7	80.7	23 • 6	13.8
7	57.1	70•8 70•9 71•0	69.6	80+8	80.8	23•7 23•0 22•9	13.7
9	57.8	70•9	79 • 1	80.8	80.8	23.0	13.1
11	58.0	71.0	70 • 3	80.9	80.9	22.9	13.0
13	56.8	70.8	70.2	80.8	80.8	24.0	14.0
15	58.2	71.4	73 • 7	81.3	81.3	23•1	13.2
17	62.6	73.6	77.8	82.7	82.7	24.0 23.1 20.1 19.5 21.4	11.0
19	63.2	73.9	77.8	82.7	82.7	19.5	10.7
21	60.2	72.0	74.4	81.6	81 • 6	21 • 4	11.8
23	60 • 1	71.7	75.0	81 • 6	81.6	21.5	11.6
25	63•8	74.5	80.9	83 • 4	83+4	21.5 19.6 18.6 18.3	10.7
27	67.7	77.5	84-1	86.3	86.3	18.6	9•8
29	68.8	78 • 1	84.9	87.1	87.1	18.3	9.3
31	67 • 1	76 • 4	83.4	85 • 4	85 • 4	18.3 17.3 17.5 18.2	9.3
33 35 37	66•8	75•8	80•9	84 • 1	84 • 1	17.3	9•0
35	66.2	75-1	80-1	83.7	83.7	17.5	8.9
37	65 • 8	75.5	81.8	84.0	84.0	18.2	9•7
39	73.3	80.5	86.4	89.0	89.0	15.7 16.3 16.6 15.7	7.2
41	71.6	78•7	85.2	87.9	87•9	16-3	7 - 1
43	68 • O	75.8	82.4	84 • 6	84.6	16.6	7 • 8
45	69.8	76.9	83.2	85 • 5	86•6	15.7	7 • 1
47	71.2	77 • 7	83.9	86.7	86 <b>.7</b>	15.5	6.5
49	74.1	79.6	83.5	87.8	87.8	13.7	5 • 5
OH 51 52	76 • 1	81 • 8	84.8	89•7	89•7	13.6	5•7
OH -51 >52	75•6	81 •8	85 • 1	89.0	89.0	15.5 13.7 13.6 13.4	6.8
55	73.0	78 • 8	83.1	86.2	86•2	13.2 13.8 13.6 14.6	5 • 8
57	71 • 4	76•9	83.0	85 • 2	85•2	13.8	5•5
59	70•9	76•7	8 <b>1•</b> 5	84 • 5	84.5	13.6	5•8
61	68.7	75•0	76.2	83.3	83.3	14-6	6 • 3
63	64.7	72.9	73•3	81.8	81 • 8	17.1	8•2
65	63.7	<b>7</b> 2•4	72.0	81 • 6	81.6	17.9 20.9 19.9	8 • 7
67	59.9	71 • 1	69•1	8•08	8•08	20•9	11.2
69	61 • 1	71 • 3	69 • 4	81.0	81.0	19.9	10.2
71	59•7	71.1	69•1	80•9	80•9	21.2	11.4
73	58•0	70•8	69•5 69•5 69•9	80•7	80•7	22•7 22•2 22•5	12.8
75	58•5	7:•2	69.5	80.7	80 <b>-7</b>	55.5	12+7
77	58+2			80•7	8U•7	22.5	12.8
79	57•5	70∙8	69•2	80 • 7	80.7	23.2	13.3

TABLE D-V

## NOISE LEVEL TIME HISTORY DATA

#### BELL 206 L

OCTOBER 14 1976

# EVENT 76, 145 MPH FLY BY, CENTERLINE MIC. ( SOFT SITE )

# 1/2 SECOND INTEGRATION US NOISE INDEXES (DB RE 20 MICRO PA)

INT	DBA	DBD	OASPL	PNL	PNLT	PNL-DBA	DBD-DBA
3	63 • 4	73.2	79.3	82.6	82+6	19.8	9 • 8
5	68.0	75.8	81.7	84.8	84.8	16.8	7 • 8
7	70 • 4	77.2	82.9	86.0	86.0	15.6	6.8
ģ	72.8	79.2	85.0	87.8	87.8	15.0	6 • 4
11	74.9	80.7	86+2	89,6	91.3	14.7	5 • 8
13	73.4	79.5	85.0	88.3	89.7	14.9	6 • 1
15	71.8	78+3	84 - 1	87.0	88.7	15.2	6+5
17	72.1	78.5	83.3	87.1	87.1	15.0	6 • 4
19	73.3	78.8	82.6	87.5	87.5	14.2	5.5
21	76.4	81.2	84.0	<sup>:</sup> 89•3	89.3	12.9	4.8
он>23	75.8	80 • 8	83 • 6	88 • 4	88.4	12.6	5.0
25	72.4	77.9	80.7	85.7	85.7	13.3	5∙5્
2 <b>7</b>	70.7	76.3	80.0	84.5	84.5	13.8	5•6
29	68.9	75.2	79.3	83.3	83.3	14-4	6 • 3
31	66•7	74.5	80.6	83.0	83.0	16.3	7.8
33	65•8	74-1	81.5	83.0	83.0	17.2	8 • 3
35 35	66.5	74.7	83.9	83 • 4	83 • 4	16.9	8 • 2
33 37	65-1	74.6	85.2	83.0	83.0	17.9	9•5
39	62.7	73.8	83.8	82.4	82.4	19.7	1.1 • 1.
41	61+4	72.5	80+3	81.8	81.8	20.4	11.1
	61.6	72.9	81.5	81.9	81.9	20.3	1,1 • 3
43	59.7	71.6	78.4	81.2	81.2	21.5	11.9
45	58.9	71.6	77.8	81.1	81 - 1	22.2	12.7
47 49	58•6	71 • 3	77.4	81 - 1	81.1	22.5	12.7

#### NOISE LEVEL FREQUENCY SPECTRA TIME HISTORY

BELL 206 L

OCTOBER 14 1976

EVENT 71, 130 MPH FLY BY, MIC. 150 METERS WEST

1/3 OCTAVE FREQUENCY BAND VS TIME (SECONDS)
(DB RE 20 MICRO PA)

BAND	-28.0	-22.5	-17.0	-11.5	-6•0	<b>- •</b> 5	0	5.0	10.5	12.0
17	60.9	64.7	63.3	69•7	76.0	71.5	70 • 8	65 • 8	63 • 7	•0
18	63 • 4	62.4	67 • 8	71.7	76.9	75.9	72.1	67.0	64.2	•0
19	60.2	62.4	67 • 1	68.7	75 • 1	70 • 4	66.9	65.7	61.2	•0
20	59.7	60 • 4	65 • 1	71.2	75.3	64.9	63 • 1	61.3	60.7	•0
21	56.9	56 • 6	67.5	66.6	71.3	61.0	61.2	57.8	58 • 4	•0
22	52 • 7	55.0	63.0	66.2	66.9	64.7	69 • 4	55.0	57.6	•0
23	50.7	55.0	60 • 4	65 • 8	63 • 4	69 • 4	71.2	58.2	57.8	•0
24	50.9	55.0	57 • 3	59.2	56.0	73.1	72.7	63.3	55 • 6	•0
25	50 • 4	55.0	55.0	56.3	62 • 4	70 • 6	68.3	65.0	55.0	•0
26	50 • 4	55•0	55.0	56 • 8	69.6	67.7	67.5	59.5	55.0	•0
27	50 • 4	55.0	55.0	55 • 0	73.8	71.7	70•7	59.1	55.0	•0
28	50 • 4	55•0	55.0	55.0	71.8	66 • 5	65 - 6	63.8	55.5	•0
29	50 • 4	55•0	55.0	55 • 0	61.2	65.9	65∙8	60.0	55 • 0	•0
30	50 • 4	55•0	55•0	55.0	58 • 6	64.4	64.8	59.7	55.0	•0
31	50 • 4	55•0	55.0	55 • 0	55 • 1	62.4	62.7	57.3	55.0	•0
32	50 • 4	55•0	55•0	55•0	55+0	59.5	59 • 8	55.2	55 • C	•0
33	50 • 4	55.0	55•0	55 • 0	55.0	57.9	58 • 4	55.0	55.0	•0
34	50 • 4	55 • 0	55.0	55•0	55.0	55.0	55.0	55.0	55 • 0	•0
35	50 • 4	55 • 0	55•0	55•0	55.0	55.0	55.0	55.0	55.0	• Q
36	50 • 4	55 • 0	55.0	<b>55</b> • 0	55.0	55.0	55.0	55.0	55.0	•0
37	50 • 4	55.0	55•0	55.0	55.0	55.0	55.0	55.0	55.0	•0
38	50 • 4	55.0	55.0	55 • 0	55.0	55.0	55.0	55.0	55.0	•0
39	50 • 4	55•0	55 • 0	55 • 1	55.0	55.0	55.0	55.0	55.0	•0
40	52.2	56 • 4	57 • 6	57•9	57.2	57.5	57.8	57.9	57.8	۰0
Α	55 • 9	59.0	62.0	63 • 8	73.9	75 • 2	74.7	67.8	61 • 3	•0
a	65+9	70 - 1	71.7	73.0	79.3	79.5	79.3	73.2	70 • 7	5 • 0
OASPL	70.9	76 • 6	75.7	79.0	83.8	83.7	82.6	76.0	73 • 7	•0
PNL	76.7	80.9	81.9	82 • 8	87.9	87.6	87.2	82.7	81.2	•0
PNLT	76.7	80 • 9	81.9	88.88	89.2	87.6	87.2	84-1	81.2	•0

#### NOISE LEVEL FREQUENCY SPECTRA TIME HISTORY

BELL 206 L

OCTOBER 14 1976

EVENT 72, 130 MPH FLY BY, MIC. 150 METERS WEST

1/3 OCTAVE FREQUENCY BAND VS TIME (SECONDS)
(DB RE 20 MICRO PA)

BAND	-28.0	-22.5	-17.0	-11.5	-6.0	<del>-</del> •5	0	5•0	10.5	12.0
17	60 • 3	66 • 6	68 • 4	72.6	76.5	73.0	70.7	67.9	65 • 1	64.8
18	62 • 2	65.0	67.2	73.0	78 • 4	74.8	71 • 3	69.4	66 • 1	65 • 1
19	60.8	63.9	66 • 5	72.4	75.8	70 • 6	69.0	67.5	64.8	61.9
20	58.8	31.7	66.5	72.0	75 • 7	64.6	64.2	64.3	60.9	59.9
21	56.2	58.0	64.4	65.9	71.9	59.9	61 • 1	58.9	59.3	57.6
22	56 • 6	56 • 9	60 • S	63.3	68 • 7	65.9	67.0	58 • 6	57.4	55.7
23	55.7	55 • 5	57.0	61.7	63.5	71.3	71 • 1	62.4	55.5	55.0
24	55.7	55.0	55•4	57.6	57•7	72.7	71.8	65.9	55 • 1	55.0
25	54 • 6	55.0	55.7	57 • 6	64 • 6	70.6	68 • 4	65•3	55.0	55.0
26	53 • 6	55.0	55 • 0	58•9	70 • 4	70 • 7	69•3	58•7	55.6	55.0
27	54 • 4	55.0	55.0	62.5	70 • 7	73.4	70.7	63.3	59.2	56.0
28	53.7	55 • 0	55.8	60.2	65 • 1	69•0	67.7	61.6	56.2	56 • 1
29	54.0	55.0	55•0	55 • 1	64 • 5	67.4	65•9	62.7	55.0	55 • 0
30	54.4	55.0	55.0	55.2	61 • 9	64.9	63.2	60.7	55.0	55.0
31	53.5	55 • 0	55•0	55•0	56 • 7	62 • 1	61.0	58 • 1	55.0	55•0
32	53.5	55.0	55.0	55•0	55 • 0	58•9	58•9	55 • 8	55.0	55.0
33	53.5	55.0	55.0	55•0	55 • 0	56 • 6	57.0	55 • 1	55.0	55•0
34	53.5	55.0	55 • 0	55•0	55•0	55.0	<b>55•</b> 0	55.0	55•0	55.0
35	53.5	55.0	55•0	55•0	55•0	55.0	55.0	55.0	55.0	55•0
36	53.5	55.0	55+0	55•0	55•0	55.0	55+0	55.0	55•0	55•0
37	53.5	55.0	55.0	55•0	55 • 0	55 • 0	55.0	55.0	55.0	55•0
38	53.5	55.0	55•0	55•0	55 • 0	55•0	55.0	55.0	55•0	55•0
39	53.5	55.0	55.0	55•1	55•0	55.0	55.0	55.0	55•0	55.0
40	56 • 1	56 • 5	57 • 8	57.5	57.5	57•8	57.8	57.5	57.6	57 • 5
Α	63 • 8	59.8	61.9	65.7	73.5	76 • 1	74.7	69 • 1	62.2	61.1
D	69•5	70 • 4	71.2	73.6	78.5	80 • 1	79 • 1	74.3	71 - 1	70 • 4
OASPL		77 • 5	77.7	81 • 1	84.6	83 • 8	82.5	78 • 6	76 • 1	74.5
PNL	79.7	81 • 1	81.8	83.2	87 - 1	88 • 5	87.1	83.3	81 • 4	81.1
PNLT	79.7	81 - 1	81.6	83.2	87 • 1	88•5	87 • 1	83 • 3	81 • 4	81 - 1

#### NOISE LEVEL FREQUENCY SPECTRA TIME HISTORY

BELL 206 L

OCTOBER 14 1976

EVENT 73, 130 MPH FLY BY, MIC. 150 METERS WEST

1/3 OCTAVE FREQUENCY BAND VS TIME (SECONDS)
(DB RE 20 MICRO PA)

BAND	-28·5	-22.5	-16.5	-10+5	-4.5	0	1 • 5	7 • 5	13.5	15.0
17	58•2	60.4	64: •8	69.3	74.8	70.9	68 • 2	60 • 0	53 • 6	56.9
18	57 • 4	62.2	66.2	70.2	77.0	74.1	64.8	61.5	59.2	57.5
19	56 • 9	58 • 8	64.8	68 • 3	74.9	68.9	63 • 4	61.6	60.2	57.6
. 20	52.9	59.6	62.0	69 • 6	74.3	65 • 1	59 • 3	56 - 4	56 • 8	56.8
21	50 • 7	55 • 5	59.9	64.5	70 • 6	57.0	59.7	56.2	56 - 1	55 • 4
22	50 • 4	55 • 1	57.0	64.2	67 • 4	59 • 4	72 • 1	55.0	55.3	55.0
23	50 • 4	56 • 3	57 • 1	62∙€	65.0	65.0	69 • 6	55.0	56.7	56.9
24	50 • 4	55•3	55•1	57.0	55.4	71 • 5	74.6	56.2	57.6	57 • 1
25	50 • 4	55 • 1	55 • 0	57.8	57.4	67.9	64 • 1	58 • 3	55.0	55.0
86	50 • 4	55+0	55 +0	56 + 1	60 • 4	67.2	67.7	59.0	55.0	55.0
27	50 • 4	55•0	55 • 0	57.2	63 • 1	69 • 1	66•6	58.0	55.0	55.0
28	50 • 4	55 • 0	55•0	57 • 1	57.8	64.9	68•3	56 • 6	55.0	55.0
29	50 • 4	<b>55.</b> 0	55 • 0	55.9	55.0	65 • 1	66 • 4	57•5	55•2	55.0
30	50 • 4	55•0	55 • 0	55 • 3	55.0	63.8	64.7	55 • 4	55.0	55.0
31	50 • 4	<b>55 •</b> 0	55 • 0	55•0	55.0	62 • 5	63 • <b>5</b>	55•0	55.0	55.0
32	50 • 4	55 • 0	55.0	55•0	55.0	59•6	60 • 4	55•0	55.0	55.0
33	50 • 4	<b>55.</b> 0	55 •0	55 • 0	55•0	58 • 6	58 • 5	55.0	55•0	55.0
34	50 • 4	55.0	55•0	55 • 0	55.0	55•5	55•5	55.0	55.0	55•0
35	50 • 4	<b>55•</b> 0	55+0	55 <b>∙</b> 0	55•0	55.0	55.0	55.0	55.0	55.0
36	50 • 4	55 • 0	55.0	55 • 0	55•0	55.0	55.0	55•0	55.0	55.0
37	50 • 4	55.0	55 • 0	55•0	55•0	55•0	55 • 0	55•0	55.0	55.0
38	50 • 4	55 • 0	55 -0	55.0	55.0	55.0	55•0	55.0	<b>55•</b> 0	55.0
39	50 • 4	<b>55 •</b> 0	55 • 0	55.0	55 • 0	55 • 2	55.0	55•0	55 • 1	55.0
40	52 • 4	57 • 6	57 • 7	57 • 7	57•9	57 • 7	57.8	57•6	57.6	57.9
Α	55•2	60 • 5	60 • 1	63•6	66.2	73.3	74.4	63•8	60•9	60·2
D	65 • 4	70 • 4	70.2	72.2	75 • 2	78.2	79.0	71 • 3	70 • 3	70 • 4
OASPL		71.8	73 • 4	77.1	82.6	83 • 4	81.8	70•9	69.3	68 <b>• 5</b>
PNL	76.3	80.9	81.3	82 • 5	84+0	86.2	87 • 4	81.3	80.9	80•9
PNLT	76•3	80.9	81 • 3	82.5	84.0	86.2	87.4	81.3	80.9	80.9

NOISE LEVEL FREQUENCY SPECTRA TIME HISTORY

BELL 206 L

OCTOBER 14 1976

EVENT 71. 130 MPH FLY BY. MIC. 150 METERS EAST

1/3 OCTAVE FREQUENCY BAND VS TIME (SECONDS)
(DB RE 20 MICRO PA)

BAND	-58.0	-23.0	-18.0	-13-0	-8•0	-6•0	-3.0	0	2.0	7•0	9•0
17	54.3	60 • 0	66.2	65•7	74.4	75.9	70 - 1	66 0			<b>50</b> 0
18	55 • 4	60.9	64.2	66.8	72.5	76.6	71.8	66 • 8 65 • 1	65-1	62.9	59.2
19	57.0	56.2	64.0	67 • 7	75.2	76.8	69.8		64.5	63.6	59.5
20	55.0	55.7	64.4	68•0	76.1	77.6	71.6	64•6 66•8	65+3	59 • 5	57.0
21	53.6	55 • 1	61.5	60 • 4	71.7	72.7	61.5	57.2	57.2	58 • 2	56 • 1
22	53.5	55.0	59.2	59.3	67.9	67.9	55.1		56 • 3	57+5	56 • 4
23	53.5	55.0	57 • 6	58 • 5	63.7	63.6		68 • 5	64.8	55 • 4	55.0
24	53.5	55.0	55 • 4	55.0	56.1	61 • 3	62.5	71.9	62.5	55 • 2	55.0
25	53.5	55.0	55 ° 0	55.0			63 • 7	70.2	67 • 6	58.0	55+0
26	53.5	55.0	55.0	55+0	58 • 3	65 • 7	68 • 6	64.0	58 • 5	58 • 2	55.0
27	53.5	55.0	55+0		60 • 3	68 • 8	65 • 8	63 • 4	63 • 3	57.3	55 • 0
28	53.5	55.0	55.0	55.0	60.5	68 • 2	61 • 4	66.5	63 • 2	56.0	55 • 6
29	53.5			55.0	59.7	62 • 7	65.9	65 • 3	65 • 1	55.0	55 • 3
30	53.5	55.0	55 • 0	55.0	55 • 3	65.5	63.2	66.0	63 • 8	55 • 1	55.0
31		55.0	55.0	55.0	55.6	61 • 1	63 • 8	64.0	62.7	55•0	55.0
	53.5	55.0	55 • 0	55.0	55.0	59 • 8	61.0	64.1	61 - 7	55+0	55•0
38	53 • 5	55.0	55.0	55.0	55.0	56 • 5	60.9	61.6	59 • 8	55.0	55.0
33	53.5	55.0	55.0	55.0	55.0	55.0	56 • 5	58+0	56∙5	55.0	55.0
34	53.5	55.0	55.0	55.0	55•0	55.0	55•0	55•4	55•0	55.0	55.0
35	53.5	55.0	55.0	<b>55.</b> 0	55.0	55.0	55.0	55.0	55 • 0	55.0	55.0
36	53.5	55.0	55 • 0	55.0	55 • 0	55.0	55.0	55.0	55.0	55.0	55.0
37	53.5	55.0	55.0	55•0	<b>55•</b> 0	55.0	55.0	55.0	55.0	55+0	55.0
38	53.5	55.0	55.0	55.0	55.0	55.0	55.0	55.0	55.0	55.0	55.0
39	53.5	55.0	55.0	55•0	55.0	55.0	55.0	55.0	55.0	55.0	55.0
40	53.5	55.0	55.0	55.0	55.0	55 • €	55 • Q	55.0	55.0	55.0	55.0
A	56.2	57 · B	58.9	59.5	66 - 1	71 • 6	71.3	73.4	70 • 6	61.3	59.3
$\boldsymbol{a}$	65.0	66.3	68 • 1	68 <b>•7</b>	74.7	77.5	75 • 4	77.2	74.7	68.2	67.2
OASPL	66 • 1	71.5	73 • 8	76.8	83.4	84.5	81 - 1	82.4	78.3	73.7	72.3
PNL	79.2	80.7	81 - 3	81.6	84.5	86 . 8	84.8	85.8	83.6	81.1	80.7
PNLT	79.2	80.7	81.3	81.6	84.5	86.8	86.0	85.8	83.6	81.1	80.7

NOISE LEVEL FREQUENCY SPECTRA TIME HISTORY

BELL 206 L

OCTOBER 14 1976

EVENT 72, 130 MPH FLY BY, MIC. 150 METERS EAST

1/3 OCTAVE FREQUENCY BAND US TIME (SECONDS)
(DB RE 20 MICRO PA)

BAND	-26.5	-21-0	-15.5	-10.0	-4.5	0	1.0	6.5	12.0	13:0
17	54 • 7	59.1	67.2	71.8	75 • 6	66 • 5	67.6	69.0	71.6	70 • 4
18	53.4	58.2	68 • 5	69.5	74.2	64.0	63.5	67.7	68 - 1	66.5
19	54.4	57.5	68 • 7	69.7	73-4	65.9	67.0	64.1	63.7	63.8
20	53.2	58 • 1	70.3	72.3	73.9	65 • 4	62.2	63-0	62 + 8	61.2
21	50 • 4	55•7	67 • 1	67.3	67.3	57.6	58 • 2	60.2	59 • 3	60.0
22	50 • 4	55.0	62 • 3	63+3	61.0	65.9	66.0	55.9	57.4	57.3
23	50.4	55.0	61.7	58 • 1	57.3	71.2	65.2	55 • 6	57.6	57 • 4
24	50 • 4	55.0	57 • 8	55.0	62.5	69 • 1	68.8	58.0	57.0	57.4
25	50 • 4	55.0	56•6	55.0	68 • 4	63.3	59.5	57.5	55.0	55.0
26	50 • 4	55.0	55•0	55.0	70 • 1	60.8	61.9	56.0	55.0	55.0
27	50 • 4	55.0	55.0	55•0	65 • i	64.8	63•7	55.3	<b>56</b> 2 0	55.0
28	50.4	55.0	55 • 1	55 • 4	60 • 7	64.0	65.7	55.0	58 • 9	55.0
29	50 • 4	55•0	<b>\$5•6</b>	55.0	62 • 8	63.5	62.7	55.0	55.0	55.0
30	50 • 4	55.0	56 • 4	\$5.0	60 • 5	62.7	61.8	55.0	55.0	55.0
31	50 • 4	55.0	55.0	55.0	59.0	62•6	62 • 1	55.0	55 • 0	55.0
32	50 • 4	55.0	55.0	55.0	56.3	60 - 1	59.5	55.0	55.0	55.0
33	50 • 4	55.0	55.0	55.0	55.0	56.6	56.9	55.0	55 • 0	55.0
34	50 -4	55•0	55•0	55.0	55.0	55 • 3	55.2	55.0	55•0	55.0
35	50 • 4	55.0	55.0	55.0	55.0	55.0	55.0	55.0	55•0	55.0
36	50 • 4	55.0	55.0	55.0	55.0	55.0	55.0	55.0	55•0	55.0
37	50 • 4	55 • 0	55•0	55•0	55 • 0	55.0	55.0	55.0	55+0	55.0
38	50 • 4	55•0	<b>55•</b> 0	55.0	55.0	55.0	55 - 0	55.0	55.0	55.0
39	50 • 4	55.0	55•0	55 • 0	55•0	55∙0	55.0	55.0	55.0	55.0
40	50 • 4	55.0	55.0	55.0	55.0	55.0	55.0	55.0	55.0	55.0
A	53 • 4	57 • 8	62•3	61.7	71 - 1	71.9	71 - 1	60.9	61 • 7	59.5
D	62 • 4	66.2	70 • 4	70.8	76 • 3	76.3	75•4	69 • 6	69 • 4	68.3
OASPL	70 • 7	71 • 7	77 • 4	79.4	82.4	81.0	80 • 1	81 • 1	78 • 4	78.0
PNL	76 - 2	80.7	82.8	82.3	85 • 9	84.9	83.9	81 - 4	81.6	81.3
PNLT	76.2	80.7	82.2	82.3	85.9	84.9	83.9	81 • 4	52.7	81.3

NOISE LEVEL FREQUENCY SPECTRA TIME HISTORY
BELL 206 L

OCTOBER 14 1976

EVENT 73, 130 MPH FLY BY, MIC . 150 METERS EAST

1/3 OCTAVE FREQUENCY BAND US TIME (SECONDS)
(DB RE 20 MICRO PA)

BAND	-29.0	-23.0	-17-0	-11-0	-5.0	0	1.0	7.0	13-0	14.0
17	56.9	59•1	72•6	68 • 8	71 - 4	68 • 2	69.3	60•6	57.7	55•3
18	59.4	60.0	70 • 9	69 • 4	71.3	65.7	64.6	58 • 9	55.9	55+0
19	58.7	59 • 4	71.6	68.9	71.2	67.9	69 • 6	58 • 0	55.4	55•0
20	51.2	56.0	70 • 8	69.3	71.7	69 • 4	63 • 2	56•9	55+0	55 • 1
21	52.4	55.0	67 • 0	67.3	65.9	55.9	56.0	56•5	55.5	56.0
88	50.4	55.0	64•0	63.3	60.6	67.7	69.7	55.0	55.2	55.0
23	50.4	55.0	63 • 1	60.0	56.7	70.6	66•6	55•0	56 • 4	55•4
24	50.4	55.0	57 • 5	55.3	55.0	72.6	72 - 8	57.4	56•4	55•0
25	50.4	55.0	55•6	55.0	61.0	65.7	63.5	57.5	55.0	55.0
26	50.4	55.0	55 • 0	55•0	63.2	60.7	62.0	57.8	55.0	55.0
27	50.4	55.0	55.0	55.0	62.1	66.0	65.5	58 = 5	55.0	55.0
28	50.4	55.0	55 • 5	56.6	57.5	63.8	66•4	55.0	55.2	55.0
29	50 • 4	55.0	55•0	55.0	59 • 1	67.2	65.3	55.0	55.0	55.0
30	50 • 4	55.0	55 • 0	55•0	59.9	63.8	64.5	55.0	55.0	55.0
31	50 • 4	55•0	55 • 0	55.0	58 • 1	63.2	63.3	55.0	55.0	55•0
32	50.4	55.0	55•0	55.0	57.0	61 • 4	61 • 5	\$5.0	55.0	55.0
33	50 • 4	55•0	55•0	55.0	55.0	58 • 4	57.9	55.0	55.0	55•0
34	50 • 4	55.0	55•0	55.0	55.0	55.2	55 • 1	55.0	55.0	55.0
35	50.4	55.0	55 • 0	55.0	55.0	55.0	\$5.0	55.0	55.0	55 • 0
36	50.4	55.0	55.0	55.0	55.0	<b>\$5.0</b>	55.0	55.0	55 • 0	55 • Q
37	50.4	55 • 0	55•0	55.0	55.0	55.0	55.0	55.0	55•0	55.0
38	50 • 4	55•0	55•0	55•0	55.0	55.0	55.0	55.0	55.0	55.0
39	50 • 4	55 • 0	<b>55•0</b>	<b>\$5.</b> 0	55.0	55.0	55.0	<b>\$5.0</b>	55.0	55.0
40	50 • 4	55.0	55•0	55 • 0	55 · C	55.0	55.0	55.0	55•0	55.0
Α	53 • 7	57.4	62.8	62 • 1	67.4	73•3	73.0	61.9	59 • 0	58.0
D	61 • 9	66.1	71.8	70 • 1	73.0	77.6	77.2	68 • S	66 • 7	66.2
OASPL		70 • 8	79-2	77 • 1	79.3	82.9	82.4	74.3	71 - 6	66•7
PNL	76 - 3	80 • 7	82.6	82 • 1	83.2	86 • 4	86.3	81.0	80 • 7	80.7
PNLT	76 • 3	80 • 7	82.6	82 • 1	83.2	87 • 6	86.3	81.0	80•7	80.7

## NOISE LEVEL FREQUENCY SPECTRA TIME HISTORY

BELL 206 L

OCTOBER 14 1976

EVENT 46. 6 DEGREE APPROACH. CENTERLINE MIC. ( SOFT SITE )

1/3 OCTAVE FREQUENCY BAND VS TIME (SECONDS)
(DB RE 20 MICRO PA)

BAND	-13.5	-9.5	-5.5	-1 • 5	0	2.5	6 • 5	10.5	14.5	17.5
17	67.0	72.0	74.4	71.3	65 • 6	68 • 7	67.2	67-1	66 • 5	63 • 6
18	68 • 4	70.2	70 • 5	64.7	62 • 6	59.8	63.2	66 • 7	63-1	60.9
19	67.7	67.8	67.4	63 • 3	68 • 1	65+0	63.0	67.1	63 • 7	61.9
20	64.2	64.8	62.9	63 • 1	66.9	64.3	55.4	62.6	60 • 4	59.7
21	60.0	55,9	56 • 6	65 • 4	70.0	65.9	61.6	58 • 8	58 • 5	57.1
22	54.9	54.1	<b>65∙</b> 5	74.3	76 • 5	71 - 4	69.3	52 • 5	58.7	58.9
23	56.0	59.9	66 • 4	70.3	71.6	61.7	66.7	61.2	53 • 1	58 • 5
24	57.6	68 • 6	69.3	60 • 4	70.9	72 • 4	68.3	69.9	57.7	60 • 5
25	58.8	72.1	62 • 6	71.9	70 • 6	66 • 1	64.6	71 - 1	65 • 4	54.6
26	63.7	71 - 1	67.6	69.3	71.6	68 • 1	67.5	65•8	68 • 5	55•2
27	60 +2	65•3	70.6	67.3	70 • 1	66.2	63.3	59 • 8	65•6	57 • 3
28	52.5	70.4	62.2	64.7	68 • 7	66•9	63.6	62.2	55•4	57.3
29	53.0	64.0	60 • 9	64.2	66.9	66.2	60.8	57•4	59 <b>• 7</b>	54.5
30	49.5	59•4	59•4	63 - 5	65.0	64 • 8	59.0	56 • 8	57 • 6	51.7
31	48.3	54.7	57 • 7	62.8	64 • 4	68•7	57.9	53 • 5	53 • 1	48 • 2
32	46.0	51.9	56 • 3	61.8	64.1	61 • 1	55 • 8	52 • 3	50 • 3	45 • 6
33	45.5	47.7	54•7	60.5	62.5	58 • 6	52.7	48 • 6	46 • 1	45.0
34	45.0	45.0	51.2	58.9	59•9	56•5	51.2	45.5	45 • 0	45.0
35	45.0	45.0	46 • 8	54.9	56.9	53•6	47.3	45.0	45.0	45.0
36	45.0	45.0	45.0	50.7	53.0	49.9	45.0	45 • 0	45 • 0	45.0
37	45.0	45.0	45.0	45.8	47 • 9	46.5	45.0	45.0	45.0	45.0
38	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45•0
39	45.0	45.0	45.0	45.0	45.0	45 • 0	45.0	45.0	45.0	45.0
40	45•0	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0
Α	62 • 8	73.6	71.3	74.3	76•4	73.8	70•3	69 • 7	68 • i	61.9
D	69.2	77 • 1	75•8	78•9	80.9	77•7	74.7	74.8	71 • 6	66•7
OASPL		81.9	81 • 7	82 • 1	83.5	81.7	80.0	78 • 2	75 • 1	72 • 1
PNL	77.8	83.9	84.0	86.0	87.9	85.5	82•3	82 • 1	80•7	75 • 2
PNLT	<b>77•</b> 8	85•8	84.0	86.0	87.9	85 • 5	85 <b>•3</b>	83 • 3	81.7	75•2

## TABLE D-YI

## NOISE LEVEL FREQUENCY SPECTRA TIME HISTORY

BELL 206 L

OCTOBER 14 1975

EVENT 54. 9 DEGREE APPROACH. CENTERLINE MIC. ( SOFT SITE )

1/3 OCTAVE FREQUENCY BAND VS TIME (SECONDS)
(DB RE 20 MICRO PA)

BAND	-14-5	-11.0	<b>-7 •</b> 5	-4.0	-•5	0	3.0	6 • 5	10.0	12.5
17	70.3	68.2	67 • 9	75.1	70 - 4	70=0	71.5	71.8	70.6	67.6
18	67.6	67.0	70.2	68.0	66.6	62.5	68.5	66.2	64.6	63.4
19	70.8	71.6	69.1	70.1	67.9	66.9	66.2	64.8	63 • 4	64.4
20	68.9	67 • 6	67.2	61.0	66.0	65.9	70.8	58.9	59.5	57.0
21	61.8	58 • <b>7</b>	57.5	57.9	71.6	71.9	75.8	57.8	56.1	55.0
22	56.3	53 • 8	54.8	66 • 4	76.3	76.2	75.5	59.8	58 - 1	57 • 1
23	59.8	53 - 1	63 • 6	73.5	75.5	73.0	69.6	60.9	54 • 1	55 • 4
24	54.7	52 • 3	65 • 7	66 • 1	73.0	74.4	<b>68.9</b>	65 • 8	54.0	59.4
25	60 • 9	56 • 9	66.2	66 • 1	74.6	74.1	72.3	62.9	57.4	53.9
26	59 • 1	60 • 4	65.2	73.0	70.8	69.7	69.5	56 • 3	59.7	50 • 4
27	59 • 1	57.5	62.1	66 • 8	70.0	68 • 8	68•4	8 • 0 6	68.8	49.9
28	5i•9	51.9	62.0	66.0	66.9	67 • 3	67.9	59 • 5	61.1	53.7
29	48.7	51.9	56.2	59•8	65•5	65 • 9	65.5	58 • 3	53.8	53.7
30	47.1	47.0	53.3	58 • 1	62 • 6	61 • 4	63.2	57.6	57.5	50 • 3
31	45 • 4	46.6	51.4	56.2	59•3	59 • 1	60.2	56.0	54.0	48.4
32	45.0	45.1	48.5	53.9	58 • 1	58•6	58.4	54.3	53.7	47.8
33	45 • 0	45.0	46 • 6	51.8	55•3	56•5	55.5	51.3	49.3	45.0
34	45.0	45.0	45.0	49.4	52 • 6	53 • 4	52.8	48 • 4	45.7	45.0
35	45.0	45.0	45.0	46.0	49 • 6	50 • 6	49.7	45.2	45.0	45.0
36	45.0	45.0	45.0	45.0	47.0	48 • 6	46.9	45.0	45.0	45.0
37	45.0	45.0	45.0	45.0	45 • 0	45.7	45.2	45.0	45.0	45.0
38	45•0	45.0	45 .0	45.0	45.0	45.7	45.0	45.0	45.0	45.0
39	45 • 0	45.0	45.0.	45 • 0	45.0	45 • 4	45.0	45.0	45.0	45.0
40	45.0	45 • 0	45.0	45.0	45.0	45•5	45.0	45.0	45.0	45.0
A	68.0	60 • 6	67.9	72.6	75•7	75 • 0	74.3	66.8	65•3	60.1
D	68 • 8	68 - 1	72.5	77.6	80 • 8	80 • 3	79.2	71.5	69 • 1	65.4
OASPL	78 • 4	78 • 4	80 • 4	85.0	85 • 3	84.9	85.0	79.7	77.1	74.1
PNL	76 • 6	76 • 3	80.2	85.1	87.5	87.2	86.4	79.3	77.8	74.2
PNLT	76•6	76.3	80.2	85 • 1	87 • 5	87 • 2	86.4	79.3	79•0	74.2

## NOISE LEVEL FREQUENCY SPECTRA TIME HISTORY

BELL SOO L

OCTOBER 14 1976

EVENT 59. 70 MPH APPROACH. CENTERLINE MIC. ( SOFT SITE )

1/3 OCTAVE FREQUENCY BAND VS TIME (SECONDS)
(DB RE 20 MICRO PA)

BAND	-37.5	-30 • 0	-22.5	-15.0	-7.5	0	7•5	15•0
17	•0	68 • 1	69•3	67.9	71.0	74.4	70.9	66•5
18	•0	67 - 1	71.0	67.7	69.5	67.3	68.2	66.3
19	•0	66 • 0	72 • 4	66.9	68.7	67.5	67.3	64 • 6
20	۰0	62.2	70.5	66.5	66.8	68.6	63 • 4	60.8
21	•0	61.0	66 • 1	60.2	56+0	72.9	58.0	58 • 5
22	-0	57.3	59.9	56.6	57.7	77.7	59.7	56,4
23	•0	56 • 2	64 • 6	59•3	61.8	71.6	62 • 1	55.6
24	•0	55 • 3	60.2	55 • 1	69.9	74.0	67.8	55 * 6
25	•0	56 • 7	60•9	59.5	71.2	73.8	66.9	55.5
26	•0	55 • 6	59.2	63.3	68.3	71 + 3	58 • 3	55.2
27	•0	55.0	63 • 4	62.0	63.3	69.9	62.6	58 • 4
28	•0	55 • 0	64 • 1	58.0	64 • 4	70 • 7	60.2	56.9
29	•0	55+0	62 = 4	55.0	58 • 4	67.4	57.6	55•0
30	•0	55•0	58•2	55•0	57.7	64.8	55.9	55.0
31	•0	55•0	55•2	55•0	57.0	63.2	55•6	55+0
32	•0	55 • 0	55•0	55.0	55.3	62.1	55•0	55•0
33	•0	55.0	55•0	55•0	55.0	59.6	55.0	55.0
34	•0	55•0	55•0	55.0	55.0	57.6	55.0	55.0
35	•0	55.0	55•0	55•0	55.0	55.0	55.0	55•0
36	•0	55.0	55•0	55.0	55.0	55.0	55.0	55.0
37	•0	55.0	55•0	55•0	55.0	55.0	55.0	55.0
38	•0	55.0			55•0	55.0	55.0	55.0
39	•0	55•0	55•0	55.0	55.0	55.0	55•0	55.0
40	•0				55.0	55.0	55•0	55.0
Α	58 • 2			63.7	70.5	76.0	66•9	61.0
D	69 • 1	69 • 4	73.8	71.3	76 • 1	81.0	73.5	69 • 7
OASPL	72.5	76 • 3	79•8		80.7	85 • 8	78 • 9	75 • 7
PNL	•0	81.4	83 • 5	82.2	85.0	89.3	83.0	81 • 3
PNLT	•0	81 • 4	83 • 5	82.2	86.2	89.3	83.0	81.3

## TABLE D-III

# NOISE LEVEL FREQUENCY SPECTRA TIME HISTORY

BELL 206 L

OCTOBER 14 1976

EVENT 60, 70 MPH FLY BY, CENTERLINE MIC. ( SOFT SITE )

1/3 OCTAVE FREQUENCY BAND VS TIME (SECONDS)
(DB RE 20 MICRO PA)

BAND	-15.0	-10.0	-5.0	0	5•0	10.0	15.0	0.63	23.0
17	•0	64.2	66.9	71 - 1	67.1	65.2	64.0	60.3	• 0
18	•0	65.2	65.6	64.3	<b>5</b> 8 • 8	59.5	59.5	57.9	• 0
19	•0	55.0	65 • 1	59.2	58 • 5	62.5	61.1	58.3	•0
20	•0	64.6	64.4	63.7	60.6	55 • 6	58.8	57.1	•0
21	•0	60.3	56.3	69.5	64.5	56.3	56.5	56.9	• 0
22	•0	56 • 3	6:.6	73.9	65 • 6	58.0	56.2	55.9	•0
23	•0	57.0	64.9	73.1	63.2	59.8	56.4	55.1	•0
24	•0	58.0	68 • 4	67.4	59.1	62.5	59.7	55.0	•0
25	•0	60 • 1	67.0	75.8	67.0	58.8	60.7	55.0	•0
26	•0	62.6	66.5	73.8	60.6	55.6	57.5	55.0	•0
27	٠0	63 • 2	67 + 8	71.1	64 • 4	59.8	55.0	55.4	•0
28	۰0	55•6	65•5	68.2	62.8	55•8	55.8	55.0	•0
29	•0	57 • 1	58 • 6	66.9	62.4	56.8	55•3	55.0	•0
30	•0	55.0	56 • 4	64.8	61.9	55.5	55.0	55.0	•0
31	۰0	55•0	56 -2	65 • 5	60 • 8	55.0	55.0	55.0	• 0
32	•0	55.0	55.0	65 • 4	59 • 2	55 • 0	55•0	55 - 0	• 0
33	•0	55 • 0	55•0	65 • 1	55•9	55.0	55.0	55.0	• 0
34	•0	55.0	55.0	58.9	55.0	55.0	55.0	55.0	• 0
35	•0	55 • 0	55.0	55 • 3	55.0	55.0	55.0	55.0	• C
36	•0	55 • 0	55.0	55.0	55 • 0	55.0	55•0	55.0	• 0
37	•0	55 • 0	55.0	55 • 0	55.0	55.0	55.0	55.0	• 0
38	•0	55 • 0	55.0	<b>55.</b> 0	55∙0	<b>55•</b> 0	55•0	55•0	• 0
39	•0	55•0	55.0	55•0	55 • 0	55.0	55.0	55.0	•0
40	•0	<b>55 •</b> 0	55•0	55.0	55•0	55.0	55•0	55 • O	•0
Α	55•9	64 • 4	70.0	76+3	70 • 2	63.8	62.0	58 • <b>7</b>	• 0
D	66 • 2	71 - 4	75.4	81 + 3	74.8	70•9	70 • 1	<b>68 •</b> ୪	<b>5</b> • 0
OASPL	82.2	76.0	80 • 2	84.3	76•9	74.5	72.1	69•7	• 0
PNL	•0	82.0	84.2	89•6	83.5	81.5	81.2	80.8	• 0
PNLT	•0	88 •0	84.2	89•6	83 • 5	81.5	81.2	80 . 8	• 0

## NOISE LEVEL FREQUENCY SPECTRA TIME HISTORY

BELL 206 L

OCTOBER 14 1976

EVENT 61, 70 MPH FLY BY, CENTERLINE MIC. ( SOFT SITE )

1/3 OCTAVE FREQUENCY BAND VS TIME (SECONDS)
(DB RE 20 MICRO PA)

BAND	-20.0	-16.0	-18.0	-8•0	-4.0	0	3.0	4•0	8•0	9•5
17	65 ∘ წ	65.9	68.9	70.2	69 • 6	71.2	68 • 8	65.5	72.2	68 • 1
18	65.7	65.5	70.5	70.8	71 - 1	65 • 5	66.2	65.5	68 • 3	63.2
19	65 • 1	64.0	69.6	71.1	65 • 5	65.0	63.7	59.9	66.6	64.4
20	63 • 7	63.2	69.9	70.7	62.7	68.6	70.2	65.6	62.4	62.0
21	62.0	60 • 1	63.5	61.8	56.9	70.5	76.4	72.5	58.2	59.0
22	58 • 6	56 • 8	58.0	56.2	63.6	73.3	75.8	72.6	56.8	<b>55•</b> ∩
23	58•9	56.9	58.0	59.4	69.0	69.9	73 • 4	70.9	62.6	55.8
24	55•6	55.0	55•5	69.3	70.7	74.0	75 • 6	69.0	67.4	60 - 1
25	56•5	55.0	65+5	76.8	69 • 6	75.3	80.5	76.8	66.3	62.0
26	55 • 0	56 • 8	69.7	77.8	74.8	73.0	76.2	72.7	59•4	59.5
27	55.0	57.9	67 • 4	71.6	73.7	70 • 9	76 • 3	73.2	63•6	56.0
28	55 • 0	56 - 4	63+3	65-2	67 • 4	68•0	71.0	67.6	59•2	58 • 2
29	55•6	55.0	59.2	63.2	62.9	66•0	65.5	62.5	58 • 1	55.0
30	55 • 0	55 • 0	58•5	59.0	62.2	63•8	62.6	61 • 4	57.2	55.8
31	55.0	55.0	55.0	56.2	60 • 8	61.3	61.8	60.7	55.5	55.0
32	55•0	55.0	55.0	55.0	56 • 1	59•0	59.0	58.3	55•0	55•0
33	55.0	55.0	55.0	55+0	55.0	56•9	55•4	55 • 3	55•Q	55.0
34	55.0	55.0	55.0	55•0	55•0	55 <b>•</b> 0	55•0	55.0	55.0	55+0
35	55.0	55.0	55.0	55.0	55•0	55.0	55•0	55.0	55.0	55.0
36	55.0	55.0	55•0	55.0	55.0	55.0	55.0	55.0	55.0	55.0
37	55•0	55.0	55•0	55.0	55•0	55.0	55.0	55.0	55•0	55•0
38	55 • 9	55.0	55.0	55•0	55.0	55•0	55.0	55.0	55•0	55.0
39	55 • 0	55.0	55.0	55.0	55.0	55•0	55.0	55.0	55•0	55.0
40	55.0	\$ <b>5</b> •0	55.0	55.0	55.0	55•0	55•0	55.0	55•0	55.0
A	60 • 2	60 • 6	69 - 1	76•5	<b>75</b> • 3	75 • 8	78 • 8	75.3	67•3	63•4
D	69 • 8	69.7	74.6	80•9	79•5	80 • 9	83.8	79.9	73.2	70 • 6
OASPL	77 - 1	74.6	79.6	83.8	82.3	84.0	86.4	83.3	79.2	76.2
PNL	81 • 4	81 • 4	84.7	89.3	88 • 1	88.9	91.9	89.0	83.0	81.7
PNLT	81 • 4	81 • 4	84.7	89.3	88 • 1	88•9	91.9	89•0	83.0	81.7

#### NOISE LEVEL FREQUENCY SPECTRA TIME HISTORY

BELL SO6 L

OCTOBER 14 1976

EVENT 63. 106 MPH FLY BY. CENTERLINE MIC. ( SOFT SITE )

1/3 OCTAVE FREQUENCY BAND VS TIME (SECONDS)
(DB RE 20 MICRO PA)

								•			
BAND	-34.5	-27.5	-20.5	-13-5	-6.5	-1 • 5	0	•5	7•5	14.5	17.5
17	56.3	58•6	66.9	67.5	70 • 4	67+9	69 • 7	69+9	68.9	63+1	61.9
18	57 •2	60 • 8	68•6	70.0	70.6	71.2	63 - 4	62.1	68.4	59.9	59.7
19	56.9	60 • 7	70.5	70.2	70 - 1	66.2	65.2	66.6	65.5	62.3	58.9
50	58 • 2	60 • 1	70.8	70.2	69 • 4	60.9	64.8	65.3	61.3	60.0	58.7
21	58+0	59 • 1	67.5	67 • 4	64.7	63.3	67.0	67.8	60.5	58.8	57.5
. 22	56 • 1	57 • 0	63.3	64.3	58.3	70.9	73.9	74.3	57.2	56.9	56.5
23	55 • 3	55 • 3	59.8	66.3	57.4	76.3	73 • 1	70.5	57.3	56.3	55 • 1
24	54.7	55•5	55•7	64.3	57.9	73.0	69.3	71.6	61 +8	55.7	55.0
25	<b>5</b> 3•5	55.0	56+3	63 • 4	62.7	71.1	68.2	67.8	61.5	55+0	55.0
26	53.5	55.0	55.9	60.8	64.0	76.4	68 • 7	67.0	55.9	55.3	55.0
27	53•5	55.0	55.4	63.6	60 • 1	71.3	65.0	64.0	55.2	56+3	55.0
28	53 • 5	55.0	55.0	64.9	56.5	71.2	64.7	64.2	55.6	55.4	55.0
29	53.5	55.0	55.0	58.9	<b>57 •</b> 5	67.0	64.4	64.1	55.0	55.0	55.0
30	53.5	55.0	55+0	56.2	55.0	64.2	62.5	62.2	55.0	55.0	55.0
31	53 • 5	55.0	55.0	55 • 3	55.0	62.5	61.2	61 • 1	55.0	55.0	55.0
32	53.5	55.0	55.0	55.0	55.0	60.0	60.2	60.7	55.0	55.0	55•0
33	53.5	55.0	55.0	55.0	55.0	58 • 7	58.9	59•2	55.0	55.0	55.0
34	53.5	55.0	55.0	55.0	55.0	56.2	56.7	56.9	55.0	55.0	55.0
35	53.5	55.0	55.0	55.0	55.0	55.0	55.0	55 • 1	55.0	55.0	55.0
36	53.5	55.0	55.0	55.0	55.0	55.0	55.0	55.0	55.0	55.0	55+0
37	53.5	55.0	55.0	55.0	55.0	55.0	55.0	55+0	55.0	55.0	55.0
38	53.5	55+0	55.0	55.0	55 • 0	55.0	55.0	55.0	55.0	55.0	55.0
39	53.5	55.0	55.0	55.0	55.0	55.0	55.0	55.0	55.0	55.0	55.0
40	53.5	55.0	55.0	55.0	55 • 0	55 • 0	55.0	55.0	55.0	55•0 55•0	
A	57-1	58 . 4	61.5	67.9	65 • 3	76.8	72.9	72.6	62.5	60.1	55.0
D	67.2	68.9	71.4	73.7	72.3	81.4	78.7	78.7	70.8	69.0	57.8
OASPL	67.7	69.3	77.8	78 • 8	79.4	83.8	82.5	82.8	79.1		68.5
PNL	79.4	80.9	82.2	83.7	82.7	89.9	86.7	86.4		72.5	71.1
PNLT	79.4	80.9	82.2	85.0	82 • 7	89.9	86.7	86.4	81.8	81.0	80 • 8
				55-5	J	97.5	30 + /	00.4	81.8	81.0	80.8

## TABLE D-II

#### NOISE LEVEL FREQUENCY SPECTRA TIME HISTORY

BELL 206 L

OCTOBER 14 1976

EVENT 65, 106 MPH FLY BY, CENTERLINE MIC. ( SOFT SITE )

1/3 OCTAVE FREQUENCY BAND VS TIME (SECONDS)
(DB RE 20 MICRO PA)

BAND	-12:0	-9.0	-6+0	<del>-</del> 3•0	0	3.0	6 • 0	9 • Ü	12.0
17	64.7	69.5	73•3	74.9	71 • 5	66•6	69•6	64.7	•0
18	64.7	70.0	72.6	72.8	69 • 4	64.9	67.1	59.4	•0
19	64.2	71.8	72.9	75.0	63 • 1	61.6	66.3	62.8	•0
20	64.4	71.4	73.5	72.0	64.6	63 • 1	62.9	58.4	•0
21	58 • 4	66 • 5	67 • 1	61.7	65 • 8	66 • 6	57.8	57.7	• 0
22	56.7	61.9	61.9	62.8	73.2	69.6	57.8	55.5	•0
23	55.2	60.3	58.0	73 - 6	74.2	64.3	61.9	55.0	•0
24	50 • 4	55.0	57.5	75 • 4	68.0	63.8	65 • 8	55.0	•()
25	50 • 4	56 • 8	65 • 5	76 • 4	69.5	69.2	66 • 4	55.2	•0
26	54.2	63.3	66.3	67.9	70 - 4	62 · B	59 • 3	55+0	• 0
27	51.7	60 • 2	60.6	71.0	68 • 6	63.3	59 • 8	55.3	•0
28	50 • 4	61.0	57 • 4	66.9	66 • 8	63 • 4	61.2	55.0	•0
29	50.4	55.0	57 . 2	63 • 2	64 • 6	63.1	57.2	55.0	•0
30	50 • 4	55.0	55 • 1	60.9	62.8	61 • 1	55 • 5	55+0	•0
31	50 • 4	55•0	55.0	59.3	62 • 2	59.3	55• <b>7</b>	55.0	•0
32	50 • 4	<b>55.</b> 0	55.0	58•7	61 • 8	57.4	55.0	55.0	•0
33	50 - 4	55.0	55.0	55•8	60 • 5	55•3	55.0	55.0	•0
34	50 • 4	55.0	55.0	55•0	57 - 1	55.0	55.0	55.0	•0
35	50 • 4	55.0	55.0	55.0	55.0	55.0	55•0	55.0	•0
36	50 • 4	55.0	55.0	55.0	55.0	55.0	55.0	55.0	•0
37	50 • 4	55.0	55.0	55.0	55 • 0	55.0	55•0	55.0	•0
38	50 -4	55 • 0	55.0	55.0	55.0	55.0	55.0	55.0	• 0
39	50 • 4	55 • 0	55 <b>•</b> 0	55.0	55•0	<b>55•</b> 0	55•0	55.0	• 0
40	50 • 4	55 • 0	55.0	55 · O	55.0	55.0	55.0	55.0	•0
A	57.2	64.7	66•7	74.5	74.2	70.4	66+5	59.2	•0
D	65.9	72.6	74.0	80•6	79.5	75.9	72.9	68.8	5.0
OASPL		79.1	81.3	85.0	83•3	81.6	<b>78•</b> 0	71.2	•0
PNL	77 • 3	82.9	83.6	89 • 1	87.6	84.5	82.7	80.9	• 0
PNLT	77•3	84.0	83•6	89 • 1	87•6	84+5	82•7	80.9	•0

#### NOISE LEVEL FREQUENCY SPECTRA TIME HISTORY

BELL 206 L

OCTOBER 14 1976

EVENT 66, 106 MPH FLY BY, CENTERLINE MIC. ( SOFT SITE )

# 1/3 OCTAVE FREQUENCY BAND VS TIME (SECONDS) (DB RE 20 MICRO PA)

BAND	-14.5	-10+5	-6.5	-2.5	0	1 • 5	5 • 5	9.5	13.5
17	59 • 2	69 - 1	72.9	68 • 7	68 • 5	66.9	71.5	62 • 6	•0
18	57.9	68 • 2	72.4	68 • 3	63 • 8	57.8	65.4	60.0	•0
19	58 • 4	69.0	73.6	67.9	63.9	64.3	66.9	61 • 1	•0
20	60.9	70.6	73.0	66.2	64.8	66.0	57.7	57-1	•0
21	57 • 4	66.2	67.7	55.7	67.3	64.3	58.6	57.0	•0
22	54.7	63.6	60 • 5	61.0	74.3	71.9	64.8	56.3	•0
23	54.7	63.3	57.2	69 - 4	75.5	64.8	66.2	55.0	• 0
24	50 • 4	57 • 1	58.6	67.5	68 • 7	71.4	68.7	55•4	•0
25	50 • 4	59.9	66.6	69.0	68.0	64.7	66 • 4	59 • 1	•0
26	50 • 4	55 • 6	69.0	63.3	70.9	66 • 1	62.1	61 - 1	•0
27	50 • 4	55 • 8	63.9	64.0	66.5	61.6	64.2	60 • 3	• 0
28	50 • 4	56 • 7	60 • 8	59.9	64.9	63.3	59.1	55 • 1	٠Û
29	50 • 4	55 • 7	60.2	59.2	62 • 6	62.0	58 • 1	55•9	• 0
30	50 • 4	55.0	56.3	58•7	61.2	61.6	56.7	55.2	• 0
31	50 • 4	55 • 0	56 • 1	57.5	60.9	61.0	55.2	55.0	•0
32	50 • 4	55.0	55.0	57.2	60.7	59 • 6	55.0	55•0	•0
33	50 • 4	55.0	55.0	55•7	60 • 5	57.2	55•0	55 • 0	•0
34	50 • 4	55.0	55.0	55.0	57.6	55•8	55•0	55.0	• 0
35	50 • 4	55+0	55.0	55.0	55.2	55.0	55.0	55.0	•0
36	50 • 4	55•0	55.0	55.0	55.0	55.0	55.0	55.0	•0
37	50 • 4	55.0	55.0	55.0	55 • 0	55 • C	55.0	55.0	•0
38	50 • 4	55.0	55.0	55.0	55.0	55.0	55.0	55.0	•0
39	50 • 4	55∙0	55.0	55.0	55.0	55.0	55•0	55.0	• 0
40	50 • 4	55.0	55.0	55.0	55.0	55.0	55•0	55.0	•0
Α	54.7	63.0	68 • 8	69.3	73.4	71.4	67.8	63.2	• 0
D	64 • 9	71.5	74.9	75.2	79 . 4	77.0	73.8	70 • 4	5.0
OASPL	67.9	77.6	81 • 4	80.3	82•5	81.2	77.7	71 - 4	•0
PNL	76.7		84.8	84.2	87.7	85 • 4	83 • 4	81.3	•0
PNLT	76 • <b>7</b>	82.5	84.5	64.2	87 • 7	85 • 4	83 • 4	81.3	•0

## TABLE D-YI

#### NOISE LEVEL FREQUENCY SPECTRA TIME HISTORY

BELL 206 L

OCTOBER 14 1976

EVENT 67, 118 MPH FLY BY, CENTERLINE MIC. ( SOFT SITE )

1/3 OCTAVE FREQUENCY BAND VS TIME (SECONDS)
(DB RE 20 MICRO PA)

BAND	-10.0	-8.5	-7.0	-5.5	-4.0	-2.5	-1.0	0	•5	2.5
17	71.6	73.7	76.2	79.1	75.4	73.6	75.8	72.9	75.0	71.2
18	70.2	72.9	76 • 1	77 - 1	74.3	71.6	72.6	69.4	67.0	69.0
19	71.9	73•5	75.4	75.6	72.8	71.4	65.3	65.7	66.7	65.3
20	73.2	74.9	74.9	75.6	73.1	68.8	68.6	68 • 6	66.6	65.7
21	68.6	69.8	69.5	69.3	62.9	61.3	74.4	71.9	69.0	66.5
22	64.4	66 • 4	63.2	61 - 1	58.8	65.8	80.2	77.5	74.7	67.6
23	62.3	64.2	60.2	61.3	67.6	73.9	83.7	78.9	70 • 4	64.2
24	57.3	58•6	55.7	62.0	66 - 1	71.2	74.6	74 - 1	72.8	63.9
25	56.9	61 • 4	59.8	71.6	73.6	71.3	82.0	77.1	68 • 8	69 • 1
26	64.8	69 • 4	63.0	72.9	69.9	70.6	79.9	73 - 1	68.3	64.7
27	62.3	67 • 8	59.9	67 • 1	62.7	68.3	79.6	73 - 1	66.3	63.3
28	59.9	65 • 4	56.5	65.2	66.1	66 - 1	76.8	71.2	65.9	62.9
29	55•9	61.6	55.8	61.8	60.0	62.8	73.8	66.7	64-1	63.5
30	56 • 1	62 • 1	55.0	57.4	58.2	61.6	70 - 1	65.9	63.0	61-4
31	55.0	58 • 4	55.0	55 • 6	56 • 1	60 • 4	68.8	65.2	61.5	59.3
32	55.0	56 • 1	55.0	55.0	56 • 1	60.2	67.0	63 • 1	60.5	57.8
33	55.0	55.0	55.0	55.0	55.2	58 • 1	64.2	61.3	58 • 4	55.8
34	55.0	55•0	55.0	55.0	55.0	56.2	60.0	57.9	56.6	55.0
35	55.0	55•0	55.0	55.0	55.0	55.0	56.6	55 - 8	55.2	55.0
36	55.0	55.0	55.0	55.0	55•C	55.0	55.0	55.0	55+0	55.0
37	55.0	55•0	55.0	55.0	55.0	55.0	55.0	55.0	55.0	55.0
38	55.0	55•0	55.0	55.0	55.0	55.0	55.0	55.0	55.0	55.0
39	55.0	55•0	55.0	55.0	55.0	55.0	55.0	55.0	55.0	55+0
40	55.0	55 • 0	55.0	55.0	55.0	55.0	55.0	55.0	55.0	55.0
A	66.6	71.8	65.7	72.1	71.8	73.2	82.2	76.9	73.6	70.3
D	73.6	76.5	74.9	78+2	77.6	78.9	86.9	82.2	79 - 1	75.6
OASPL	81.6	82 • 8	85 • 3	85.8	84.6	84.0	90.2	85 · B	83.4	82.4
PNL	83.4	85•9	84.0	87.5	86.8	87.3	95.0	91 - 1	87.3	84.7
PNLT	83 • 4	85.9	84.0	87.5	88.4	87.3	95.0	91.1	87.3	
								~ * ~ *	0/•3	84.7

NOISE LEVEL FREQUENCY SPECTRA TIME HISTORY

BELL 206 L

OCTOBER 14 1976

EVENT 68, 118 MPH FLY BY, CENTERLINE MIC. ( SOFT SITE )

1/3 OCTAVE FREQUENCY BAND VS TIME (SECONDS)
(DB RE 20 MICRO PA)

BAND	-24=5	-19-5	-14-5	-9.5	-6.5	-4.5	0	•5	5.5	10•5	12.5
17	58 • 2	65 • 6	68 • 4	73.7	76.4	74.1	68 - 8	67.8	72.0	61 • 7	61.6
18	57.8	64.3	67.2	70.7	74.9	73.2	64.8	64.0	68 • 1	58 • 6	58 • 4
19	56 • 1	64.8	69.6	71.9	75 • 4	73.2	64.7	65 • 5	66.9	57 • 1	57.8
20	55.5	65 • 1	71.1	72.7	75.3	73.4	64.9	65 • 1	63 • 1	55.1	55 - 1
21	53.5	60.0	67.8	68 • 6	68 • 2	64.9	65 • 4	65.5	60.2	56.5	56.5
22	53.5	56 • 6	65+3	63.9	61.5	56.2	73 • 1	72.6	57.4	55.0	55.0
23	53.5	55•8	60.3	60 • 4	59 • 6	64.6	72.5	67 · B	62.0	55.0	55•3
24	53.5	55•0	58.2	55.4	62 • 2	63.9	71.0	71.2	66.6	55.0	56+6
25	53.5	55•0	60.2	56.8	70.9	71.9	66.0	65.9	66-1	55.0	55.0
26	53.5	55•0	\$8.5	57.9	73.5	70.2	67.3	66 • 4	59.7	55.5	55.0
27	53.5	55 • 0	55.6	58-6	67.8	62 : 4	64.7	68 • 3	61 • 1	56.7	55.0
28	53.5	55•0	57.9	57 • 7	62.2	65 • 7	64.2	63.0	59 • 3	55.0	55.3
89	53 <b>• 5</b>	55•0	58•3	55.0	64.2	62.8	62 - 1	61.6	58 • 3	55.0	55.0
30	53.5	55•0	56.3	55.0	58 • 3	58 • 0	60 • 9	60 • 3	55+4	55.0	55.0
31	53.5	55•0	55.0	55.0	57.3	56.2	60.7	59 • 8	55•0	55.0	55.0
32	53.5	55•0	55.0	55.0	55.0	55•0	59 • 8	59.0	55.0	55.0	55.0
33	53 • 5	55•0	55.0	55.0	55.0	55.0	57.9	57.2	55.0	55.0	<b>5</b> 5•0
34	53.5	55.0	5 <b>5 •</b> 0	55.0	<b>55.</b> 0	55•0	56 • 1	55•4	55•0	55.0	55.0
35	53.5	<b>5</b> 5 • 0	<b>55•</b> 0	55.0	55.0	55.0	<b>55•</b> 0	55.0	55.0	55.0	55.0
36	53.5	55 • 0	55•0	55.0	55.0	55 • 0	55.0	55.0	55.0	55.0	55.0
37	53.5	55.0	55.0	55 • 0	55.0	<b>55•</b> 0	55.0	55.0	55•0	55•0	55.0
38	53.5	55.0	<b>55•</b> 0	55•0	55 • Û	55•0	55.0	55.0	55•0	55.0	55.0
39	53.5	55.0	55 • 0	55•0	55.0	55•0	55•0	55.0	55 • 0	<b>5</b> 5•0	55.0
40	53 • 5	55.0	55•0	55•0	55.0	55.0	55.0	55.0	55.0	55•0	<b>5</b> 5•0
Α	55•6	58.2	64 • 4	63.6	72.3	71.4	71.9	71.0	66 • 5	59•6	58 • 4
D	69.2	71.3	73.2	73 • 8	77.9	77.2	78 • 4	77.5	74-1	71 - 1	71.0
OASPL	68 • 4	76.0	78 • 2	81.0	83•6	82 • 1	81.9	81.8	79 • 1	71.0	69•9
PNL	79.2	81.2	82 • 7	82.9	<b>87.</b> 5	86.0	86 • 1	85•5	82.8	80 • 7	80.7
PNLT	79 • 2	81.2	82•7	82.9	88 • 8	87 • 1	86.1	85.5	82.8	80.7	80.7

#### NOISE LEVEL FREQUENCY SPECTRA TIME HISTORY

BELL 206 L

OCTOBER 14 1976

EVENT 693 118 MPH FLY BY, CENTERLINE MIC. ( SOFT SITE )

1/3 OCTAVE FREQUENCY BAND US TIME (SECONDS)
(DB RE 20 MICRO PA)

BAND	-24.5	-19.0	-13-5	-8.0	-2.5	0	3 • 0	8•5	14.0
17	60•9	62.7	67.6	70.6	71.9	69.2	62.8	61.6	57•1
18	58 • 1	62 • 4	<b>65.</b> 2	70.7	70 • 3	68 • 4	57.4	58 • 3	55.9
19	57 • 7	64.6	64.7	71.0	69.5	62.7	56 • 4	59.9	55 • 6
20	57 • 4	63.9	64.0	71.2	69.3	66.9	60.3	56.9	55.0
21	55•5	62.7	60 • 1	65•5	56.9	74.0	64.3	55 • 3	55 • 6
58	55 • 0	57 • 9	57 • 0	61.2	56.5	77.2	65.6	55.0	55.0
23	55•2	57.5	56 • 2	57 • 4	66.2	76 • 1/2	59.4	55.8	55.0
24	55•7	<b>55.</b> 0	55.0	55.0	63.2	71.8	61.0	61.2	55.0
25	55•0	55 • 6	55 • 1	57 • 4	68 • 7	76•7	65.6	62.3	55.0
26	55•0	55 • 0	55.0	61.6	60 • 4	75.9	59.7	57.8	55.0
27	55•0	55.0	55.0	58 • 5	59+5	72 + 6	60.0	55.0	55•i
28	55•0	55•0	55•0	58 • 3	59.3	69.8	61.3	55.7	55.0
29	55 • Q	55.0	55.0	55.0	57.0	66 • 1	61.5	55.0	55.0
30	55.0	55.0	55.0	55•0	56 - 1	64.4	57.1	55.0	55•0
31	55.0	55.0	55 - 0	55•0	55.0	62.7	55.5	55.0	55.0
32	55.0	55.0	55•0	55.0	55 • 1	61.5	55.0	55.0	55.0
35	55•0	55.0	55.0	55.0	55•0	59.7	55.0	55.0	55.0
34	55.0	55.0	55-0	55.0	55.0	56 • 8	55.0	55.0	55.0
35	55.0	55.0	55.0	55.0	55•0	55.0	55.0	55.0	55.0
36	55.0	55.0	55•0	55.0	55.0	55.0	55.0	55.0	55 • C
37	55•0	55.0	55.0	55.0	55.0	55.0	55.0	55.0	55.0
38	55.0	55.0	55 • 0	55•0	₹5.0	55.0	55.0	55.0	55.0
39	55 • 0	55.0	55.0	5 <b>5•</b> 0	55.0	55 • 0	55.0	55.0	55.0
40	55 • 0	55.0	55 • 0	55.0	55 • 0	55.0	55.0	55.0	55.0
A	58 • 4	58 • 9	58 • 8	63.7	66.8	77.2	67.0	61.5	58 • 1
b	70 • 7	70.9	71.5	73.3	74.6	83.2	73.9	71.4	71 - 1
OASPL	70 • 4	72.0	73.0	79.3	80.4	85.2	75.9	70.2	67.9
PNL	80.7	81.3	81.3	82.6	83.5	90.5	82.5	81.2	80.7
PNLT	80 • 7	81.3	81 • 3	82•6	83.5	90.5	82.5	81.2	80.7

#### NOISE LEVEL FREQUENCY SPECTRA TIME HISTORY

BELL 206 L

OCTOBER 14 1976

EVENT 70, 118 MPH FLY BY, CENTERLINE MIC. ( SOFT SITE )

1/3 OCTAVE FREQUENCY BAND VS TIME (SECONDS)
(DB RE 20 MICRO PA)

BAND	-27.5	-22.0	-16.5	-11.0	-5.5	0	5•5	11.0	14.0
, .	* 1			-, <u>-</u>					
17	61 • 7			71 • 2	70 • i		69 • 3	63.7	61.6
18	62 • 1	65 - 1	69 • 4		70 • 7	67.3	64•6	59•8	58 • 8
19	61.0	ó4∙5	67.2	69 • 5	70 • 6	64 • 1	63 • 3	60 • 0	59•3
20	60 • 1	64 • 4		68•9	71.0	65 • 8		58•3	5 <b>7 • 5</b>
21	59•3	-		65 • 1			58 • 1	57.2	56•4
22	54.9		61 - 4	56 • 4		76.2	59 • 6	55.1	55•1
23	54.1	55.0	59.5	58 • 5	57.3	76.5	63.2	55.0	55•0
24	53 • 5	55.0	55∙0	55+0	56 • 4	69.2	ó6∙6	55.0	55•0
25	53.5	55.0	55.0	56•3	62.2	71 - 7	62 • 6	55.0	55.0
26	53.5	55.0	55.0	59 • 3	62.9	73.5	58 • 5	55.0	55.0
27	53.5	55.0	55.0	56.3	59.0	69 • 7	60 • 9	53.2	55+0
2.8	53 + 5	55 ± C	55 • 0	55 • 1	55.2	67.5	56.9	55.0	55+0
29	53.5	55.0	55 • 0	55 • 0	57.0	65 • 4	55.5	55.0	55.0
30	53.5	55.0	55.0	55.0	55 • 5	63.3	55.0	55.0	55•0
31	53.5	55.0	55 • 0	55.0	55.8	62.7	55.0	55.0	55.0
32	53.5	55.0	55 • 0	55.0	55.0	61.5	55.0	55.0	55•0
33	53.5	55.0	55•0	55.0	55.0	59.7	55.0	55.0	55.0
34	53.5	55.0	55.0	55.0	55.0	56.9	55.0	55.0	55.0
35	53 • 5	55.0	55.0	55.0	55.0	<b>5</b> 5•0	55.0	55.0	55+0
36	53.5	55.0	55 • 0	55.0	55.0	55.0	55.0	55+0	55.0
27	53.5	55.0	55.0	55.0			55.0	55.0	55.0
38	53 . 5	<b>55.</b> 0	55.0	55.0	55.0	55.0	55+0	55.0	55.0
39	53.5	55-0	55 • 0	55.0	55.0	55.0	55.0	55.0	55.0
40	53.5	55.0	55.0	55.0	55 • 0	55.0	55.0	55.0	55.0
A	56+5	58.0	59 • 8	61.6	65.2	75.9	65.0	58.6	57.8
D	69.3	71.5	71.8	72.7	73 • 6	81.5	73.4	70.7	70 • 7
OASPL	71.2	75.0		79.3				71 • 7	70 • 3
PNL	79.5			82 • 1	82.7		82 • 3	80.8	80.8
PNLT	79.5			82.1	32.7		82.3	80.8	80.8
								_	_

#### NOISE LEVEL FREQUENCY SPECTRA TIME HISTORY

BELL 206 L

**OCTOBER 14 1976** 

EVENT 71, 130 MPH FLY BY, CENTERLINE MIC. ( SOFT SITE )

1/3 OCTAVE FREQUENCY BAND VS TIME (SECONDS)
(DB RE 20 MICRO PA)

BAND	-28.0	-23.0	-18.0	-13.0	-8•0	<del>-</del> 5+5	-3.0	0	2.0	7.0	9•0
17	65.2	70.9	70 - 1	71.9	75 • 3	77.8	76.8	66 • 4	68.3	64.4	59.7
18	60.8	66.6	68 • 6	72 - 1	74.6	75 • 2	72.8	60.8	60 • 1	60.8	58.7
19	60.8	62.6	70.0	71.9	75 • 6	75 • 5	72.4	64.3	60.8	61 - 1	58 • 4
20	56.0	61.0	72.7	73.2	76.8	76 • 4	71.5	67.5	63.1	58 • 7	55.9
21	54.3	56.8	71.0	67.8	72.7	70.8	59.0	69.2	69.0	56.6	56.3
22	53.5	55.0	70 • 4	63 • 4	68 • 7	63 • 6	58 • 8	73.8	66.6	55.0	55.7
23	53.5	55.0	68.5	60.8	63 • 4	62 • 3	71.5	76.5	61.1	55.5	55.0
24	53 • 5	55.0	63.6	56 • 3	57 - 4	61.5	63.8	72.3	63.2	61.5	55 • 2
25	53.5	55.0	64.5	55.5	60 • 2	68 • 8	72.1	69.6	66.9	68.9	57.3
26	53.5	55.0	61-6	55.0	65 = 6	72 - 1	66.4	71.3	8•30	61.0	56 • 6
27	53.5	55.0	55.0	55.9	65 • 3	68 • 1	71.4	70.2	60.9	55.9	58.7
28	53.5	55.0	55.0	56 • 1	60 • 9	62 • 3	66.6	66.3	62.2	60.1	55.9
29	53.5	55.0	55.0	55.0	55.9	66 • 4	65.8	65 • 1	62.2	57.5	55.0
30	53.5	55.0	55.0	55.0	55.0	59 • 6	62.4	63.7	61.1	57.5	55.0
31	53.5	55.0	55.0	55 • 0	55.0	57.0	59.1	64.4	58 • 7	55.2	55.0
32	53.5	55•0	55.0	55.0	55.0	55 • 0	56.8	62 • 7	57.4	55.0	55.0
33	53.5	55.0	55.0	55 • 0	55.0	55.0	55.4	60.8	55.0	55.0	55.0
34	53.5	55.0	55.0	55.0	55.0	55.0	55.0	58 - 1	55+0	55+0	55•0
35	53.5	55.0	55.0	55.0	55.0	55.0	55 • 0	55 • 8	55.0	55.0	55.0
36	53.5	55.0	55.0	55.0	55.0	55 • 0	55.0	55.0	55.0	55.0	
37	53.5	55.0	55.0	55.0	55.0	55.0	55.0	55.0	55.0	55.0	55.0
38	53.5	55.0	55.0	55.0	55.0	55.0	55.0	55.0	55.0		55.0
39	53.5	55.0	55.0	55.0	55.0	55.0	55.0	55.0	55.0	55.0	55.0
40	53.5	55 • 0	55.0	55.0	55.0	55.0	55.0	55•0	55.0	55•0 55•0	55.0
A	55.7	57 • 1	65 • 7	62.5	68 • 3	72.8	73 • 4	75.4	69.2		55.0
D	69.7	71.7	75 • 4	73.5	76.5	78 • 4	78 - 4	80.8		65 • 3	61 - 3
OASPL	74.4	82 • 4	80 • 1	80.0	83.0	-			74.9	72.6	71 • 4
PNL	79.3	81 • 1	83.7	82.7	85.4	83.7	82.8	83 • 1	78 • 6	73.6	70.7
PNLT	79.3	81.1	83.7	82.7	85 • 4	87•3 89•1	87•0 87•0	88•8 88•8	83•5 83•5	81 • 7 82 • 9	81.0 81.0

## NOISE LEVEL FREQUENCY SPECTRA TIME HISTORY

BELL 206 L

OCTOBER 14 1976

EVENT 72. 130 MPH FLY BY. CENTERLINE MIC. ( SOFT SITE )

1/3 OCTAVE FREQUENCY BAND US TIME (SECONDS)
(DB RE 20 MICRO PA)

BAND	-26.0	-21 -0	-16.0	-11-0	-8,0	-6•0	-1 •0	0	4.0	9•0	12.0
17	59.2	61 • 6	68.0	71.6	73 • 2	74.5	71.7	67.2	69.8	63.5	59•0
18	56.3	59 - 8	67.4	70.7	72.9	72.8	66 • 1	65.3	65+0	59 • 4	55.8
19	53.5	58 • 5	68 • 7	70.7	73.9	73.0	67.9	66.0	66.3	60 • 6	61.3
20	53.5	59.5	71.0	73.2	73.7	72.8	64.2	69 • 7	60 • 4	58 • 1	57.6
21	53.5	57 • 2	65.9	66.5	68 • 6	67.4	64.7	71.2	63 • 7	56.2	55 • 1
22	53 • 5	55.0	64 - 1	62.2	62.9	61.2	71 - 1	73 • 1	65.2	55.0	55.0
23	53.5	55 • 0	62.2	56.3	61.7	61.5	75.3	75.0	66+8	55.0	55+0
24	53.5	55.0	57.9	55.0	64.0	64 - 1	66.6	68.0	65.5	55 • 4	55.0
25	53.5	\$5 • 0	58 • 5	57.8	68 • 8	66.2	70 • 1	70.7	61.9	55.7	55.0
26	53.5	55.0	55.0	64.2	71.3	67.0	74.0	71.2	63.0	55 + 7	55 = 0
27	53.5	55 ∙0	57 • 8	62.9	67.3	61.9	68 • 4	69+3	60 • 3	56 • 4	55.0
28	53.5	55 • 0	56.6	57.6	60 • 7	62.6	66.2	65.8	59 • 6	55.0	55.0
29	53.5	55 • 0	55•3	55.2	64.0	ι, .	63.8	63.7	58 • 8	55.0	55.0
30	53.5	55.0	55.0	55.8	57.2	61 • 4	61.6	62.2	56.8	55.0	55.0
31	53.5	55 • 0	55.0	55.0	58.0	58 • 8	60.0	60.7	55.8	55.0	55.0
32	53 • 5	55 • 0	55.0	55.0	56.4	55.3	59.2	60 • 4	55.2	55+0	55.0
33	53.5	55.0	55.0	55.0	55.0	55.0	57.5	58 • 9	55.0	55.0	55.0
34	53.5	55.0	55.0	55.0	55.0	55.0	55•0	55.6	55.0	55.0	55.0
35	53 • 5	55 • C	55•0	55.0	55.0	55.0	55.0	55.0	55.0	55.0	55+0
36	53.5	55 • 0	55 • 0	55.0	55.0	55•0	55.0	55.0	55.0	55.0	55.0
37	53.5	55.0	55+0	55.0	55.0	55•0	55.0	55•0	55.0	55+0	55.0
38	53 • 5	55•0	55 • 0	55.0	55 • 0	55.0	55.0	55.0	55.0	55.0	55.0
39	53 • 5	55.0	55.0	55.0	55.0	55.0	55.0	55.0	55•0	55.0	55.0
40	53.5	55.0	55•0	55•0	55•0	55.0	55•0	55.0	55.0	55.0	55.0
A	55.7	5 <b>7 •</b> 7	62•7	65•7	70.9	69 • 7	74.3	73.8	66 • 8	59.6	58 • 4
D	69 • 1	71-1	72.8	74.2	77.2	75•9	79.6	79.6	74.3	71.3	71 - 1
OASPL	68 - 1	72.6	77 • 6	80.5	81 • 8	81.7	83.1	83.0	78.0	70.8	69.0
PNL	79.1	80.8	82 • 4	83.0	86 • 4	84.8	88 • 1	87.8	83.0	80.9	80.8
PNLT	79 - 1	80.8	82.4	83.0	88 • 1	84.8	88•1	87.8	83.0	80.9	80.8

#### NOISE LEVEL FREQUENCY SPECTRA TIME HISTORY

BELL 206 L

OCTOBER 14 1976

EVENT 73, 130 MPH FLY BY, CENTERLINE MIC. ( SOFT SITE )

1/3 OCTAVE FREQUENCY BAND VS TIME (SECONDS)
(DB RE 20 MICRO PA)

-27.5 -22.0 -16.5 -11.0 0 11.0 13.5 BAND -5 .5 5 • 5 17 55.7 60.8 75.5 66.2 64.5 64.5 66.5 65.4 67.6 62.9 18 55.0 62.4 75.5 62.1 61.5 61.1 65.9 65.3 59 • 8 19 60.2 61.2 58.9 59.5 66.8 66.5 75.5 64.0 58 • 6 20 55.8 68.2 76.3 66.9 58.0 57.5 57.8 67.9 21 55 · Q 55.4 65.7 70.8 65.8 56.0 58.9 57.0 67.4 57.2 55.2 22 55.2 55.0 61.5 63.3 65.8 73.3 56.9 61.2 77.8 61.6 59.9 55.7 23 55.0 55.0 58.9 62 • 1 24 55.0 55.0 55.3 57.9 55.6 68.2 66.6 59.7 56.3 55.3 55.0 25 55 • 0 55 + 0 55.0 56 • 1 63.2 69.0 66.6 26 55.0 55.0 55.1 55.5 68 + 5 75 - 1 59 = 4 55 + 6 55.0 27 55.0 63.9 70.5 60.5 60.0 55 • 1 55.0 55.1 57.6 28 55.0 55.0 55.0 55.4 59.0 68.3 60.6 58 • 2 55.7 55.0 55.0 29 55.0 55 . 0 55.0 55.2 59.3 66.8 57.8 57.9 65.3 56.4 55.0 55.0 30 55.0 55.0 55.0 55.0 55.0 31 55.0 55.0 55.0 55.0 55.8 64.1 55 • 6 55.0 32 55.0 55.0 55.0 55.0 56.4 63.3 55.0 55.0 55.0 33 55.5 62 • 1 55.0 55.0 55.0 55.0 55.0 55.0 55.0 34 55.0 55.0 59.0 55.0 55.0 55.0 55.0 55.0 55 • 0 55.0 35 55.0 55.0 55.0 55.0 55.0 55 • 7 55.0 55.0 36 55.0 55 + 0 55.0 55 + 0 55.0 55.0 55.0 55.0 55.0 55.0 55.0 55.0 37 55.0 55.0 55.0 55.0 55.0 55.0 38 55.0 55.0 55.0 55.0 55.0 55.0 55.0 55.0 55.0 55.0 39 55 + 0 55 • 0 55.0 55 • 0 55.0 55.0 55.0 55.0 40 55.0 55.0 55.0 55.0 55.0 55.0 55.0 55.0 55.0 68.7 66.6 62.4 59•4 Α 57.0 58.0 60.3 62.2 76 • 3 D 72.3 72.4 76.4 81.8 73.9 71.4 71 - 1 70.8 70.8 76.9 73.8 OASPL 66.8 72.0 74.5 75.5 82.8 83.8 74.0 89.6 PNL 80.7 80.8 81.7 82.1 85.3 82.3 81.4 81.0 PNLT 80.7 80.8 81.7 82.1 85.3 89.6 82.3 81.4 81.0

## TABLE D-II

#### NOISE LEVEL FREQUENCY SPECTRA TIME HISTORY

BELL 206 L

OCTOBER 14 1976

EVENT 74, 145 MPH FLY BY, CENTERLINE MIC. ( SOFT SITE )

1/3 OCTAVE FREQUENCY BAND VS TIME (SECONDS)
(DB RE 20 MICRO PA)

BAND	-24.5	-19.5	-14.5	-9.5	-4.5	<del>-</del> • 5	0	• 5	5•5	10.5	13-5
17	56.6	62.5	68.9	73.3	76•6	71.6	69+0	66•6	64-5	61.3	59.6
18	56 • 4	58 • 6	65+3	71.5	73.8	65 • 9	63.6	63.2	61.0	57.7	58.0
19	56.0	60.2	63.9	71.2	73.8	63.5	65 • 1	68 • 1	60 - 4	58 • 1	56.0
20	55 • 6	60.7	62.8	73.7	74.0	67.4	68 • 6	68 • 5	57.9	55.9	55 • 4
21	55.0	56 • 3	63 • 8	72.8	68 • 1	64.4	65 • 6	66.4	0•5ډ	55 • 4	55.0
22	55.0	55.0	62.2	70.3	59 • 1	70 • 4	73.4	75.6	55.2	<b>5</b> 5 <b>&gt;</b> 0	55.0
23	55.2	55.0	58 • 4	66.5	65 • 2	78 • 7	78 • 1	76.3	60 - 1	55.0	55.0
24	55.0	55.0	56 • 7	63.9	62.6	66.8	69.0	72 . 6	64.9	55.0	55.0
25	55.0	55 • 0	55 • C	59.5	67.0	70 • 4	69 • 1	69 • 5	64.7	55.0	55.0
26	55.0	<b>55 •</b> 0	56 • 1	62 • i	67•Ū	74.4	73.9	72.3	58 • 6	55.0	55-0
27	55.0	55•0	55.0	62.5	60.2	70 • 4	71.3	70•8	58 • 6	55.0	55 • 1
28	55.0	55.0	55,0	58 • 1	61 • 4	68 • 1	68 • 4	67.8	58 • 1	55.0	55.0
29	55.0	55 • 0	55.0	55.6	58•7	66.0	65•9	65•9	55.6	55.0	55.0
30	55.0	55•0	55.0	55.0	56.0	66.5	65•3	65•0	55.0	55.0	55.0
31	55.0	55.0	55+0	55.0	<b>5</b> 5•0	65 • 3	64.5	64 • 1	55.0	55.0	55.0
32	55.0	55•0	55.0	55.0	55.0	62.9	62.7	62.2	55•0	55.0	55.0
33	55.0	55•0	55.0	55,0	55•0	62 • 3	61.7	61 • 1	55•0	55.0	55•0
34	55.0	55.0	55.0	55.0	55.0	58 • 3	57.8	57•3	55•0	55.0	55.0
35	55.0	55•0	55.0	55.0	55•0	55 • 1	55.0	55•0	55.0	55.0	55.0
36	55.0	55•0	55.0	55.0	55.0	55•U	55.0	55.0	55•0	55.0	55.0
37	55.0	55•0	55.0	5 <b>5 •</b> 0	55•0	55 • 0	55.0	<b>55•0</b>	55•0	55.0	55.0
38	55.0	55•0	55.0	55.0	55.0	55.0	55.0	55•0	55.0	55.0	55 • 0
39	55.0	55•0	55.0	55.0	55 • 0	55.0	55.0	55.0	<b>55•</b> 0	55.0	55.0
40	55.0	55.0	55.0	55.0	55.0	55.0	55.0	55•0	55+0	55.0	55.0
Α	56•9	56 • 8	60 • 1	66 • 5	68•0	76 • 1	76.0	75•6	64.7	58 • 0	57.5
D	70 • 7	70 • 8	71.7	75 • 8	75 • B	81.8	81.9	81.8	72.9	70 • 8	70.8
OASPL	58.7	70.2	75.0	80.9	82.4	84.8	85•2	85 • 1	73.3	69 • 5	69.2
PNL	80 • 7	80 • 8	81.6	84.1	84.6	89.7	89.6	89.0	81.8	80.7	80.7
PNLT	80.7	80 • 8	81 • 6	84 • 1	84.6	89.7	89•6	89.0	81.8	80.7	80.7

#### NOISE LEVEL FREQUENCY SPECTRA TIME HISTORY

BELL 206 L

OCTOBER 14 1976

EVENT 76, 145 MPH FLY BY, CENTERLINE MIC. ( SOFT SITE )

1/3 OCTAVE FREQUENCY BAND VS TIME (SECONDS)
(DB RE 20 MICRO PA)

BAND	-10.5	-7•5	-4.5	-1.5	0	1 • 5	4.5	7•5	10.5	11.0
17	63.8	76.5	77.0	73.2	64.5	63 • 6	71.8	75 • 7	72.9	70 • 1
18	65.6	75.6	75.8	69.8	60 • 4	59.3	68•2	71.0	68 • 4	64.7
19	65•0	76.8	77.0	65.5	68 • 8	64.0	67.8	71 - 1	66.9	64.2
20	65 • 5	76.6	77.5	64.3	67.5	60.7	63.3	68.9	64.2	61.0
21	62.0	72.7	70.0	62 • 1	65 • 6	64.8	60 • 7	68 • 1	62 • 1	60 • 4
55	58.7	69.9	61.3	65.5	74.8	69.7	57.9	63.0	57.9	56 • 3
23	55.5	65.5	67.8	76.4	74.9	62.5	61.9	59.7	56 • 8	55.9
24	53.5	59 • 8	64.1	65 • 4	72.5	66.0	66.5	58 • 2	56 • 4	56.0
25	54 • Q	64.4	72.9	71.0	69 • 1	70.0	64.9	58 • 7	55.2	55.0
26	57 • 2	67.5	70.7	71.3	71 • 3	64.5	59.5	59.4	55.0	55.0
27	56•5	66•6	63.9	66•6	69.3	63 • 1	60.5	59.6	56 • 1	55.0
28	53 • <b>5</b>	61 • 1	66.1	66•3	67.0	64.6	59 • 1	55.8	56.2	55.2
29	53•5	57 • 0	63.8	65•9	66.5	65 • 1	56.2	55.7	55.0	55.0
30	53•5	57 • 8	59.8	65•6	66.4	62 • 4	56 • 1	55.0	55.0	55.0
31	53.5	55•3	57.3	63.8	64.8	60.5	55 • 1	55.0	55.0	55.0
32	53•5	55.0	56.8	62 • 3	63 • 6	59.2	55.0	55.0	55.0	55.0
33	53•5	55.0	55.1	61.0	60.7	57 • 4	55.0	55.0	55.0	55.0
34	53.5	55.0	55.0	58 • 3	58.0	55.2	55.0	55.0	55.0	55.0
35	53.5	55.0	55.0	55.0	55.7	55.0	55.0	55.0	55.0	55.0
36	53•5	55.0	55.0	55•0	55.0	55 • 0	55.0	55.0	55.0	55.0
37	53.5	55.0	55.0	55.0	<b>55•</b> 0	55.0	55•O	55.0	55.0	55.0
38	53+5	55.0	55.0	55•0	55.0	55.0	55.0	55.0	55.0	55.0
39	53.5	55•0	55.0	55•0	55.0	55.0	55•Q	55.0	55.0	55.0
40	53.5	55•0	55.0	55•0	55.0	55.0	55.0	55.0	55 - 0	55.0
A	60 • 0	69•9	72.6	74.7	75•8	71 • 4	66.0	64.3	61.0	59 • 7
D	70•3	77 • 4	78.8	79•9	80.8	76 • 8	74.1	74.4	72.4	71.6
OASPL	74.2	83.8	84.2	83.5	83 • 6	79 • 1	80.9	84.9	80.5	78 • 4
PNL	80.2	85•9	87.4	88•3	88•4	85.0	82.7	82.8	81.7	81.2
PNLT	80•2	85•9	87.4	88•3	88 • 4	85.0	82.7	82.8	81.7	81.2

5 FOOT HOVER TEST

1/3 OCTAVE NOISE LEVEL FREQUENCY SPECTRA

BELL 206 L

OCTOBER 14 1976

EVENT 14, O DEGREES, MICROPHONE 150 METERS WEST

1/3 OCTAVE BAND US LEVEL (AVE OVER 19 SECONDS)
(DB RE 20 MICRO PA)

	ENERGY			ARITH.	STD	
BAND	AVERAGE	MAX	MIN	AVERAGE	DEV	
PENAD	MATINION		•••			
14	74.8	76.0	73.7	74.7	•6	
15	66.6	69.7	62.6	66.2	1.9	
16	74.1	76.0	72.1	74.0	• 9	
17	71.5	73.0	70 • 1	71.4	•8	
18	70.6	72.3	68.7	70.5	•9	- 1
19	72.9	75.0	69.0	72.6	1 • 6	į
20	66 • 9	68+2	64.7	66.7	1 • 1	,
21	61 • 9	64.0	58.7	61.7	1 • 4	
22	70.0	73.3	65 • 4	69.7	1 • 7	
23	65.8	68•6	62.6	65.5	1.5	
24	72.4	75.6	68 • 6	72 - 1	1.5	
25	69.3	72.8	66 • 1	69.0	1 • 7	
26	67 • 7	72.2	63 • 1	67.0	2.4	
27	68 + 5	73.3	62.9		2.8	
28	66 • 4	71 - 4	60.0	65.2	3 - 4	
29	64.5	71.0	56 • 3	62•7	4.1	
30	62 • 1	69.2	53.9	60 - 1	4.0	
31	60 • 4	68 • 2	52.7		4-1	
32	57 • 6	65.2	49.1	55•5	3.9	
33	56 • 1	63 • 1	48.6	54.1	3.9	
34	52 • 4	58 • 8	45.6	50•3	4 - 1	
35	48.8	53 • 8	45 • 0	47 • 4	3.2	
36	46.0	49.5	45.0	45 • 8	1 - 4	
37	45 • 1	46.0	45.0	45 • 1	•2	
38	45.0	45.0	45+0	45 • 0	•0	
39	45.0	45.0	45.0	45.0	•0	
40	46.9	47.1	46.6	46.9	•2	
DBA	73.3	78.5	68∙6		2.5	
DBD	78.0	82.2	74.8	77.5	1.9	
OASPL	81 - 4	83 • 6	80 • 4	81.3	•8	
PNL	85 • 1	89.0	82.2	84.7	1 • 7	
DNIT	85.1	89.0	62.2	84.7	1 • 7	

270°
(Microphone Location)
(Relative to Helicopter)

#### 5 FOOT HOVER TEST

#### 1/3 OCTAVE NOISE LEVEL FREQUENCY SPECTRA

#### BELL 206 L

OCTOBER 14 1976

#### EVENT 15, 45 DEGREES, MICROPHONE 150 METERS WEST

# 1/3 OCTAVE BAND VS LEVEL (AVE OVER 19 SECONDS) (DB RE 20 MICRO PA)

	ENERGY			ARITH.	STD	
BAND	AVERAGE	MAX	MIN	AVERAGE	DEV	
14	75.7	77.0	74.4	75•6	• 7	
15	68.0	72.6	63 • 6	67.5	2.1	
16	73 -4	75.0	72.1	73.4	- 7	
17	70.0	71.2	67-7	69.9	• <b>8</b>	225° (Microphone Location) Relative to Helicopter)
18	69 - 1	71.4	66.0	69.0	1.2	, M40
19	74.3	76.8	70.5	74-1	1.4	Mia nanhana I nastin
20	66.7	68 + 5	64.2	66 • 5		I THE TOPHONE LOCATION
21	64.0	65.9		63.9	1.2	Relative to Heliagram
22	69•8	72.7	66 • 1	69-5	1.7	CHOINE 10 MENCOPIET
23	66 • 5	68.9	62.4		1.6	
24	72.5	76.0	67.2	72.0	2.3	
25	71 - 4	74.9	63.7	70 • 7	2.8	
26	69.7	74.6	62.7	68 • 8	2.9	
27	69•3	74.7	62 • 4	68.0	3.3	
26	65.9	73.6	61.3	67.3	3.8	
29	67.7	73.4	59 • 1	65•5	4.5	
30	64.0	70 • 8	54.7	61 - 4	4.5	
31	62 • 1	68 • 6	53 • 6	59.4	4.5	
32	59.3	66.2	51 • 1	56.6	4.5	
33	57.5	64.3	48.9	54.8	4.4	
34	52•8	59.5	45.2	50 • 5	4.1	
35	49.6	56.2	45.0	43 • 1	3.2	
36	46.5	51.6	45.0	46 • 0	1.9	
37	45.5	48 • 5	45.0	45 • 4	•9	
38	45.0	45.0	45.0	45.0	•0	
39	45 • 0	45.0	45.0	45 • 0	•0	
40	46.9	47 - 3	46.6	46 • 8	•2	
DBA	74•9	79.8	68.2	73 • 8	3.2	
DBD	79.3	83 • 6	73.9	78 • 5	2.7	
OASPL	82 • 1	84 - 3	79.9	81.9	1 • 3	
PNL	86 • 0	89.9	80.8	85 • 3	2.5	
PNLT	86 • 0	89.9	30.8	85 • 3	2.5	

## TABLE D-YIL

## 5 FOOT HOVER TEST

1/3 OCTAVE NOISE LEVEL FREQUENCY SPECTRA

BELL 206 L

OCTOBER 14 1976

EVENT 16. 90 DEGREES. MICROPHONE 150 METERS WEST

1/3 OCTAVE BAND V3 LEVEL (AVE OVER 19 SECONDS) (DB RE 20 MICRO PA)

		ENERGY			ARITH.	STD		
	BAND	AVERAGE	MAX	MIN	AVERAGE	DEV		
	14	76+2	78 • 8	73.9	76.0	1.2	180° (Microphone Relative to	
	15	69.4	72.4	64.5	68•9	2•3	760	
	16	75.0	76.6	72 - 1	74.9	1 • 0	1. (	1 4.
	17	72.9	74.9	69.7	72.7	1.5	Microphone	Mocalion /
	18	71.6	74.5	67.8	71.2	1 • 8		· · · · · · · · · · · · · · · · · · ·
	19	75.3	77.1	73.4	75.2	•8	Relative to	Helicopier /
	20	68 • 2	71 -4	64.7	67.8	1.9	75	' /
	21	65.0	66.9	62+2	64+8	1.2		
	25	71.4	74.2	67.9	71 - 1	1 • 7		
	23	66 • 6	68.8	61.8	66 • 3	1 • 9		
	24	72.2	74.5	66•8	71.8	2.0		
	25	71.0	73.4	65.9		2.1		
	26	68 • 0	71.4	64.4	67.5	2•0		
	27	67 • 4	72.0	61 • 5	66•6	2.6		
	28	65 • 7	67.4	60 . 7		2.8		
	29	63 • 3	68.2	56.5		3.1		
	30	59 • 4	64.8	52 • 6		3 • 6		
	31	57.0	61.7	50 • 9		3 • 6		
	32	54-1	59.2	48.0		3 • 5		
	33	53.0	58.2	47 • 3		3 • 3		
	34	50 • 5	56 • 1	45 • 2		3.4		
	35	49 • 1	54.8	45 • 0		3.0		
	36	46 • 6	51.6	45 • 0		1.9		
	37	45 • 3	47.0	45 • 0	_	•6		
	38	45 • 0	45.0	45 -0		• O		
	39	45 • 8	46.4	45 • 0		- 4		
	40	47.0	47.6	46 - 2	_	• 4		
	DBA	72.8	76.3	68 • 9		2 • 1		
	DBD	78 - 1	80.9	74 - 6		1.7		
	OASPL	82 • 4	84.0	80 • 7		1.0		
ł	PNL	84.9	87.5	81 • 7		1.7		
			87.5	81 - 7		1 - 7		
3	PNLT	04.43	Ų. J					

5 FOOT HOVER TEST

1/3 OCTAVE NOISE LEVEL FREQUENCY SPECTRA

BELL 206 L

OCTOBER 14 1975

EVENT 17. 135 DEGREES, MICROPHONE 150 METERS WEST

1/3 OCTAVE BAND VS LEVEL (AVE OVER 19 SECONDS)
(DB RE 20 MICRO PA)

	STD	ARITH.			ENERGY	
	DEV	AVERAGE	MIN	MAX	AVERAGE	BAND
	• 9	76.0	74.3	78•0	76 • 1	14
/a #\$	1.4	67.7	65.8	70.2	67.9	15
/55	•8	76.4	74.6	77.9	76.4	16
1.	1 • 1	74.2	72.2	76 • 3	74.4	17
135° (Microphone Lo Relative to He		72.6	69.6	74.6	72.8	18
	1 • 3	71-7	69.6	74.0	71.9	19
Relative to He	1 + 5	67.5	64.8	71 -8	67 • 8	20
(1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.	1 • 3	67.3	64.5	69.5	67.5	21
	• 8	70•6	69+3		70 • 6	55
	1 • 4	70 • 6	67.6	72 • 4	70.8	23
		73.6			73 • 8	24
	2.6	74-1			74.8	25
	3 • 3	74-1			75.0	. 26
	3 - 4	74.9	67:9	81 - 1	76 • 0	27
	3 • 4	73 • 2	66.5	78.7	74 • 3	28
	3•€	70 - 1	63.9	76.5	71.4	89
	3.9	65•3	58.1		66 • 7	30
	4.4		55 • 4	71.4	64.9	31
	4.0	59 • 1	52.6	66•8	60 • 9	32
	3 • 8	57.7	51-8		59.3	33
	4.2	53 • 5	47.4	62.2	55.5	34
	3 • 5	50 • 4	45.0	57 • 4	51.8	35
	2.1	46.9	45.0	52.6	47.5	36
	• 9	45 • 4	45.0	48.5	45.5	37
	• i	45.0	45.0	45 • 4	45.0	38
	•0	45.0	45.0	45 - 1	45.0	39
	•2	47 • 0	46.6	47.4	47.0	40
	2.9	78 • 3	72.5	82 - 4	79.2	DBA
	2.5		77.5		82.9	DBD
	1.5		81.9	87.5	84.9	<b>QASPL</b>
-	2.4	89-1	84.8	92.9	89.8	PNL

92.9

PNLT

#### 5 FOOT HOVER TEST

#### 1/3 OCTAVE NOISE LEVEL FREQUENCY SPECTRA

BELL 206 L

**OCTOBER 14 1976** 

EVENT 18, 180 DEGREES, MICROPHONE 150 METERS WEST

1/3 OCTAVE BAND VS LEVEL (AVE OVER 19 SECONDS)
(DB RE 20 MICRO PA)

	DWDDAY				
DAND	ENERGY			ARITH.	STD
BAND	AVERAGE	MAX	MIN	AVERAGE	DEV
14	74.9	75.8	73.6	74.9	•5
15	64.2	67+6	62.7	63.9	1 • 3
16	73 • 4	74.6	71.7	73.4	•7
17	71 • 1	72.8	68 • 4	70.9	1.4
18	70 • 2	72.7	67.1	70•0	1 • 3
19	76 • 1	79.4	71.9	75.6	2.1
20	68 • 8	71.1	65•6	68.5	1.5
21	65.0	68 • 4	61.5	64.7	1.5
22	75.8	78.5	72.7	75.5	1.5
23	67.3	69 - 1	64.7	67 • 1	1.4
24	71.7	73.9	68•2	71.5	1.6
25	70 - 1	73.9	63.8	69.7	1.9
26	68.9	72 - 1	64.0	68.5	1.9
27	59.3	72 - 7	63.7	68.9	2-1
28	68•6	71.8	62.5	68 • 1	2.3
29	66 • 1	70 • 3	57.6	65.0	3.2
30	62 • 8	68 • 8	55.0	61 - 1	3 • 7
31	59 • 3	64.9	52.8	57+8	3.5
32	55 • 5	61.5	49.6	54.3	3.0
33	53 • 5	59 • 6	47 - 1	52.3	3.1
34	49.3	54 - 8	45.0	48.4	2.6
35	46.9	51 • 1	45.0	46.5	1.8
36	45 + 2	46.2	45.0	45.2	•3
37	45.0	45.2	45.0	45.0	•0
38	45 • 0	45.0	45.0	45.0	•0
39	45 • 0	45.0	45.0	45.0	•0
40	47.0	47 • 7	46.7	47.0	•2
DBA	74.2	77 - 6	68 • 8	73.8	2.0
DBD	19-1	81.9	75.3	78-9	1.5
OASPL	82.8	84.7	80 • 4	82.7	1.0
PNL	85.9	ძშ∙6	82.2	85.6	1.5
PNLT	85.9	88 • 6	85.8	85•6	1.5

Microphone Location
Relative to Helicopter

#### TABLE D-W/ 5 FOOT HOVER TEST

1/3 OCTAVE NOISE LEVEL FREQUENCY SPECTRA

BELL 206 L

OCTOBER 14 1976

EVENT 19, 225 DEGREES, MICROPHONE 150 METERS WEST

1/3 OCTAVE BAND VS LEVEL (AVE OVER 19 SECONDS)
(DB RE 20 MICRO PA)

	ENERGY			ARITH.	STD	
BAND	AVERAGE	MAX	MIN	AVERAGE	DEV	
14	76.0	77.5	74.8	76.0	• 7	<i>u</i> =0
15	<b>66 -</b> 3	69.0	63.3	65.9	2.0	450 (Microphone Local Relative to Helia
16	75.0	76.5	73 • 4	74.9	• 9	
17	72.2	73.7	70.9	72 - 1	•7	Microphone Loca
18	69.9	72.1	67.4	69.7	1-1	
19	73.2	76.0	70.3	73.0	1 • 4	Relative to Helin
20	66 • 4	68.6	64.1	66.2	1.2	75 7727
21	63.8	65.6	60.7	63-6	1.2	
22	67.0		64.8		1.1	
23	64.7	66.9	62.5		1 - 1	
24	67 • 1		53.0		1 • 5	
25	65.7	67 • 6	61.5		1.4	
26	64 • 3	67.3	58 • 2	63.7	2.6	
27	64.5	67.2	54.2	63 • 1	3.9	
28	61.5	64.4	55.2	60 - 7	3.0	
29	55.9	59.1	51.0	55+3	2.3	
30	52.7	54 • 1	50 • 3	52.6	1.2	
31	51.0	54 - 1	48 - 1	50 • 8	1.5	
32	48.0	49.8	45 • 7	47 + 8	1.3	
33	46.8	48.8	45.0	46.6	1 • 1	
34	45 • 1	45.7	45.0	45 • 1	+3	
35	45.0	45.0	45.0	45.0	•0	
36	45.0	45.0	45.0	45.0	٠0	
37	45.0	45.0	45.0	45.0	•0	
38	45.0	45.0	45.0	45.0	•0	
39	45.0	45.0	45.0	45.0	•0	
40	46 • 8	47.2	46 • 1	46.7	•3	
DBA	68.0	70.1	64.4		1 • 6	
DBD	73.9	75.5	72.2	73+8	1.0	
OASPL	80.3	81.5	79.5	80-3	•5	
PNL	81.0	82.1	79.0	80•9	• 9	
				~. ~		

PNLT

81.1

82.4

79.0

•9

#### 5 FOOT HOVER TEST

#### 1/3 OCTAVE NOISE LEVEL FREQUENCY SPECTRA

BELL 206 L

OCTOBER 14 1976

EVENT 20. 270 DEGREES. MICROPHONE 150 METERS WEST

## 1/3 OCTAVE BAND VS LEVEL (AVE OVER 19 SECONDS) (DB RE 20 MICRO PA)

	ENERGY			ARITH.	STD		
BAND	AVERAGE	MAX	MIN	AVERAGE	DEV		
						_	
14	77 • 1	£1.2	73.6	76 • 8	1 • 7	Q	
15	73 • 3	78 • 4	67.5	72.2	3 • 1	,	
16	74.9	77.7	72 - 1	74.5	1 • 7	Microphone Relative to	1.00
17	70 • 9	74.0	67 • 1	70 • 6	1 • 8	Metophone	
18	69+3	72.6	63 • 3	68•8	8 • 8	Politice to	Heli
19	70 • 9	72.8	68•3	70.7	1.2	Melalive 16	,,
ខ០	65 • 4	69•3	62 • 0		1 • 9		
21	62 • 0	66 • 1	58•3		1 • 8		
88	67 • 1	69 • 6	64 • 3	66.9	1.5		
23	61 • 7	64.7	58。9		8.0		
24	64 • 1	67 • 3	58 • 4	63•3	2 • 8		
25	64.0	65 • 8	59.7	63.6	1 • 9		
26	62 • 0	65 • 4	55 • 7	60.8	3 • 2		
27	61.9	65•6	54 • 1	60 • 8	3•5		
88	59•3	65 • 7	51 • 1	57.5	3.9		
29	55 • 3	61.2	48 • 8	54.0	3 - 4		
30	52 • 0	56.3	47.3	51.2	2-7		
31	49.7	54.3	46.0	49.0	2.5		
32	46 • 8	51 • 2	45.0	46 - 4	1 • 7		
33	46 • 2	49.9	45.0		1 • 3		
34	45 • 1	46 • 3	45.0	45 • 1	<b>,</b> 3		
35	45 • 0	45 -2	45.0		•0		
36	45.0	45 • 0	45 • 0		•0		
37	45 • 0	45+0	45.0		•0		
38	45 • 0	45 • U	45.0		•0		
39	45 • 0	45.0	45.0		• 0		
40	47.0	47 - 4	46.7		•2		
DBA	66 • 0	68 • 7	62.3		2.2		
DBD	72 • 4	74.2	70.2		1.3		
CASPL	80 • 7	84.2	78.3		1 - 5		
PNL	79.3	81 - 4	77.3	79 • 1	1.3		
17 17 L	1743	01+4	11.5	17.1	1 • 3		

77.3

81.4

**PNLT** 

5 FOOT HOVER TEST

1/3 OCTAVE NOISE LEVEL FREQUENCY SPECTRA

BELL SO6 L

OCTOBER 14 1976

EVENT 21. 315 DEGREES. MICROPHONE 150 METERS WEST

1/3 OCTAVE BAND VS LEVEL (AVE OVER 19 SECONDS)
(DB RE 20 MICRO PA)

	ENERGY			ARITH.	STD	
BAND	AVERAGE	MAX	MIN	AVERAGE	DEV	
14	74.5	77 -4	72.3	74.3	1 - 1	
15	67.7	72.9	61.7	66•8	2.7	-
16	73.8	75.0	72.9	73.8	•6	315° Microphone Lo Relative to Her
17	69.8	71 -4	67.2	69.7	1.0	
18	68.7	71.0	66 • 0	68•5	1.3	Microphone La
19	72.7	77.2	67 • 8	71.8	2 + 8	
20	65 • 4	68 • 5	62 • 3	65•0	1 • 7	Relative to Hel
21	60.7	64.2	56.9	60 • 4	1 - 7	(1,000)
22	64 • 1	67.2	60 • 4	63+6	2.1	
23	60 • 1	63.2	57.5	59•8	1.5	
24	64.7	68.0	60.2	64.1	2.4	
25	63 • 8	66 • 5	61 • 1	63 • 3	1.9	
26	60.9	63.8	56.9	60.5	2.0	
27	59 • 4	62 • 4	54.6	58•8	2.2	
28	57.4	59.5	53.3	56+9	2.0	
29	55 • 8	58 • 7	52.0	55 • 4	1.9	
30	52.2	56 • 4	48.6	51.6	8.8	
31	51 • 0	54.8	46.5	50 • 1	2.7	
32	48 • 9	53 • 8	45.0	47.8	2.9	
33	47 • 8	53 • 4	45.0	46.9	2.6	
34	45.7	48 • 8	45.0	45.6	1 • 1	
35	45.2	46.9	45.0	45.2	•4	
36	45.0	45.0	45.0	45.0	•0	
37	45.0	45.0	45 • 0	45.0	•0	
38	45.0	45.0	45.0	45.0	•0	
39	45 - 0	45.0	45.0	45.0	•0	
40	47 • 1	47.3	46 8	47.1	• 1	
DBA	65.6	68+3	62.6	65.2	1.9	
DBD	71 •8	74-4	69.6	71.5	1.5	
OASPL	79.0	80 • 8	77 • 4	78.9	i • 0	
PNL	79.0	81 - 6	76.9	78.7	1.6	

76.9

PNLT 79.1 81.6

78 -8

#### 5 FOOT HOVER TEST

#### 1/3 OCTAVE NOISE LEVEL FREQUENCY SPECTRA

#### BELL 206 L

**OCTOBER 14 1976** 

#### EVENT 14. O DEGREES, MICROPHONE 150 METERS EAST

### 1/3 OCTAVE BAND US LEVEL (AVE OVER 19 SECONDS) (DB RE 20 MICRO PA)

	ENERGY			ARITH.	STD	
BAND	AVERAGE	MAX	MIN	AVERAGE	DEV	
14	78 • 1	79.7	76•6	78•0	• 7	
15	68 • 7	71.6	65 • 7		1 • 7	
16	75.2	76.1	74.2		• 5	G/Y <sup>o</sup>
17	71.8	73.4	70.2		• 7	10
18	67 • 6	69.2	55 • 1		• 9	90° (Microphone Le Relative to He
19	76.2	79.0	69.7			/ Microphone Li
20	69.0	70.6	66.3			الباخداها
21	66 • 6	69.9				(Kelative la Ho
22	75 • 1	77.9				
23	71 -4	73.4				
24	78 • 8	80.8				
25	74.8	77.0	72.0		1 - 2	
26	74.5	76•5			1.2	
27	72 • 3	74-3	69+8		1.2	
28	68.9	71.4	66.3		1.5	
29	66 • 2	69.7	62.4		2.2	
30	66 • 2	70 - 1	61.0			
31	67 • 7	71.7	61.6			
32	66 • 1	70.5	61 • 6		2.4	
33	61 • 4	65-4	58 • 0		1 •8	
34	58 • 4	62.1	55 • 1		1.8	
35	54 • 2	58 • 1	51 • 1		1.8	
36	50 • 1	52.9			1.2	
37	46.2	48.2	45 - 1		•9	
38	45.0	45.0	45.0	45.0	•0	
39	45 • 0	45.0	45.0	45.0	•0	
40	45.0	45.0	45.0	45.0	•0	
DBA	78 • 1	80 • 4	75.4		1.3	
DBD	83 • 1	85.5	80.7		1.2	
OASPL	85 • 4	87.2	83 • 6		•9	
PNL	90 • 4	92.6	88 • 1	90.2	1.2	

PNLT

90 • 4

92.6

88 • 5

#### 5 FOOT HOVER TEST

#### 1/3 OCTAVE NOISE LEVEL FREQUENCY SPECTRA

BELL 206 L

OCTOBER 14 1976

EVENT 15, 45 DEGREES, MICROPHONE 150 METERS EAST

1/3 OCTAVE BAND VS LEVEL (AVE OVER 19 SECONDS)
(DB RE 20 MICRO PA)

	ENERGY			ARITH.	STD	
BAND	AVERAGE	MAX	MIN	AVERAGE	DEV	
14	78 • 1	79•8	77.0	78.0	•6	
15	65 • 1	66•6	63.8	65 • 1	• 7	
,16	75 • 7	76 • 6	74.5	75.6	•5	#5 <u>°</u>
17	71 · 7	73.3	68 • 8	71 - 6	1 • 1	(Microphone Loc Relative to He
18	68.7	70•5	66.0	68•6	1.0	Managhama Las
19	75 • 4	77.3	72.5	75•3	1.2	Miletophone Loc
80	69 • 1	71.8	66.0	68 • 8	1.5	Relative to He
21	68 • 4	70.5	65.9	68.2	1 • 1	Melanie 10 11
22	74.5	76 • 4	72.8	74.4	•9	
23	72•3	74.3	70.2	72.2	1.0	
24	75 • 5	78.5	73.4	75.4	1.3	
25	75 • 1	77.5	73.1	75.0	1.0	
25	75 • 1	78.0	72.6	75.0	1.3	
27	72.7	75.5	69.9	72.5	1.5	
28	68.0	71.2	65+5	67.8	1.4	
29	65 • 6	68.6	62.3	65.2	2.0	
30	67.7	73.1	61.5	66.5	3.2	
31	68•4	72.5	64.1	67.7	2.4	
32	66 • 4	70.3	61.4	65.8	2.3	
33	61 • 3	64 - 1	57.9	61.0	1.7	
34	58 • 5	62.7	55.2	58.0	2.0	
35	54.9	58.2	51.4	54.5	2.0	
36	50•9	53.7	47.8	50.6	1.6	
37	46 • 6	48.4	45.0	46.6	•8	
38	45 • 0	45.0	45.0	45.0	•0	
39	45.0	45.0	45.0	45.0	•0	
40	45.0	45.0	45.0	45.0	•0	
DBA	78.0	81.2	75.8	77.8	1.4	
DBD	82.7	85.7	81.1	82.5	1 • 1	
OASPL	84 • 8	87.1	83 • 6	84.7	•8	
PNL	89.9	92.8	88.0	89.7	1.2	
ד זואם	90 O	00.0	~~ ~			

PNLT

92.8

88.0

89.8

#### 5 FOOT HOVER TEST

#### 1/3 OCTAVE NOISE LEVEL FREQUENCY SPECTRA

BELL 206 L

**OCTOBER 14 1976** 

EVENT 16, 90 DEGREES, MICROPHONE 150 METERS EAST

1/3 OCTAVE BAND VS LEVEL (AVE OVER 19 SECONDS)
(DB RE 20 MICRO PA)

	ENERGY			ARITH.	STD
BAND	AVERAGE	MAX	MIN	AVERAGE	DEV
241742		00.000			
14	76•6	78 • 1	75.7	76.6	•6
15	64.3	67-4	62.9	64.2	1 • 1
16	74.9	76.8	73.7	74.8	• 7
17	71.2	73.5	68 • 8	71.0	1 • 4
18	68 • 7	71 - 1	66 • 2	68 • 4	1 • 5
19	73.7	77.4	70 • 6	73 - 1	2.1
20	67.4	71.6	62.7	66.8	2.2
21	64.4	68•2	61.7	64 • 1	1.7
22	69 • 8	75.0	65 • 6	69.2	2.2
23	67 • 3	69.7	63.7	67+0	1 • 6
24	72 - 1	74.8	68 • 7	71.8	1 + 6
25	72 • 4	75.3	68 • 9	72.1	1 • 5
26	69 • 7	71 • 6	66.0	69 • 4	1 • 6
27	67.5	70.0	64.6	67.2	1.5
28	64 • 3	66.7	61 - 1	64.0	1 • 6
29	60 • 1	62.0	56 • 8	59 • 8	1 • 7
30	57.9	60 • 9	52.0	56 • 7	3 • 2
31	60 • 9	63 • 8	52 • 5	58•7	4.3
32	61 - 1	63.8	55•7	59•7	3.3
33	58 • 2	60 • 6	55 • 1	<b>57•7</b>	2.0
34	53•9	56•6	51 • 7	53 • 6	1.5
35	49 • 4	52 • 4	46 • 4		2.2
36	46.2	48 • 8	45 • 0		1.2
37	45.0	45.0	45.0	45 • 0	•0
38	45.0	45.0	45 • 0	45.0	•0
39	45.0	45 • 0	45.0	45.0	•0
40	45 • 0	45.0	45.0		•0
DBA	73.2	75 • 1	70 - 4		1.6
DBD	78 <b>-7</b>	81 • 0	76.6		1 • 4
OASPL	81 • 8	84.2	80 • 3		1.0
PNL	85 • <b>6</b>	88•3	83 • 1		1 • 4
PNLT	85 • 6	88 • 3	83 - 1	85 • 4	1 • 4

(Microphone Location Relative to Helicopter)

5 FOOT HOVER TEST

1/3 OCTAVE NOISE LEVEL FREQUENCY SPECTRA

BELL 206 L

OCTOBER 14 1976

EVENT 17, 135 DEGREES, MICROPHONE 150 METERS EAST

1/3 OCTAVE BAND VS LEVEL (AVE OVER 19 SECONDS)
(DB RE 20 MICRO PA)

	ENERGY			ARITH.	STD	
BAND	AVERAGE	MAX	MIN	AVERAGE	DEV	
14	75.3	77.2	73.4	75.2	• 9	
15	67 • 1	71.7	62.7	66•2	2.7	Microphone Loc Relative to He
16	74 • 8	76•3	73.5	74.7	•9	
17	70.9	74.7	68.0	70 • 6	1.5	Microphane Lo
18	68 • 2	70.6	66.3	67.9	1.4	
19	76.2	78.5	74.3	76 • 1	1 • 1	Relative to He
20	67 • 7	71.0	65.6	67.6	1 • 2	( )(3.3 ) )
21	65 • 2	68 • 6	62.6	64.9	1.5	
28	72.2	74.6	69.1	72.0	1.4	
23	69 • 8	71.6	67.5	69.7	1 • 3	
24	74.5	78.2	71.7		1.5	
25	74.4	78 - 1	71.1	74.0	1.9	
26	73.9	78.2	68.0	73 - 1	2.7	
27	72.6	77.4	65.1	71 • 6	3.2	
28	69.9	75.0	63.5	68.9	3.0	
29	67.2	71 • 1	61.8		2.3	
30	67.9	73.6	59.6		4.0	
31	68.9	73 • 3	59.1	67 • 4	4.0	
32	68 - 1	73.8	60.4		3.9	
33	64.3	69.9	59.0	63.1	3.1	
34	60 • 2	64.7	55.6	59.2	2.9	
35	54.9	60 • 0	49.8	53.9	2.9	
36	50 • 3	55•9	46.7		2.5	
37	46.0	49.6	45.0	45.9	1.2	
38	45.0	45.0	45.0	45.0	•0	
39	45.0	45-0	45.0	45.0	•0	
40	45.0	45.0	45.0	45.0	•0	
DBA	78.4	82.5	75.1		2.2	
DBD	82.7	86.8	79.9		1.8	
OASPL	84.0	86.6	80.6		1 • 1	
PNL	89.7	93.7	86.8		1.9	

89.3

PNLT

89.8

94.8

5 FOUL HOVER TEST

1/3 OCTAVE NOISE LEVEL FREQUENCY SPECTRA

BELL 206 L

OCTOBER 14 1976

EVENT 18, 180 DEGREES, MICROPHONE 15C METERS EAST

1/3 OCTAVE BAND VS LEVEL (AVE OVER 19 SECONDS)
(DB RE 20 MICRO PA)

	ENERGY			ARITH.	STD		
BAND	AVERAGE	MAX	MIN	AVERAGE	DEV		
14	75.9	77.3	73.6	75.9	•8		
15	65 • 9	69.9	63.6	65•6	1 • 6.	001	<b>\</b> 0
16	73.8	75.4	71.7	73 • 6	1.0	270	,
17	70 -0	72.3	67 - 1	69•7	1 • 4	270 Microphone Relative to	1
18	67.3	69•3	64.7	67 • 1	1.2	/ Wischob home	C 00
19	77 • 4	79.9	75•0	77.2	1.5	(n-1+1-+	4-1.
20	67 • 6	71.0	65-4	67.3	1 • 5	Kelalive 10	//e//
21	63 • 8	65 • 4	61.7	63.7	$I \bullet O$		
22	75.0	77.5	72.4	74.9	1 . 2		
23	69 • 1	71.2	67.3	68•9	1 - 1		
24	77 • 7	81 - 4	72.8	77.0	2.4		
25	73.9	76.1	71.3	73.6	1 • 4		
26	74.2	75.9	72.6	74.2	.8		
27	73 - 4	75.8	71 • 1	73 • 3	1.1		
28	70 • 7	74.2	68.2	70.4	1.4		
29	65 • 6	67 • 7	63 • 6	65•5	1.2		
30	62.0	66.7	58•3	61 • 5	8.0		
31	63.0	67 • 1	58 • 4	62+3	2.4		
32	62.5	64 • 4	59.3	62 • 1	1 • 8		
33	59 • 4	61 - 1	56 • 6	59•3	1.2		
34	55 • 8	58•2	52.9	55•6	1.6		
35	50 • 2	52 • 2	48.1		1 • 1		
36	46 • 4	48 • 6	45.2		• 9		
37	45.0	45.4	45.0		- 1		
38	45.0	45.0	45.0		•0		
39	45.0	45.0	45.0	45.0	•0		
40	45.0	45.0	45.0		•0		
DBA	77 • 3	78+9	75.3	77-2	1.0		
DBD	82 • 4	84 • 1	80.7		1 •0		
OASPL	84 • 6	86.3	81 • 9		1 • 0		
PNL	89.2	91.2	87 • 5		1 - 1		
		0.0	03 5	20.0	1 - 1		

87.5

91.2

PNLT

89.2

89.0

5 FOOT HOVER TEST

#### 1/3 OCTAVE NOISE LEVEL FREQUENCY SPECTRA

BELL 206 I

OCTOBER 14 1976

EVENT 19, 225 DEGREES, MICROPHONE 150 METERS EAST

1/3 OCTAVE BAND VS LEVEL (AVE OVER 19 SECONDS)
(DB RE 20 MICRO PA)

	ENERGY			ARITH.	STD	
BAND	AVERAGE	MAX	MIN	AVERAGE	DEV	
14	74.2	75•4	71.5	74 • 1	•9	_
15	62.3	64.3	60 • 7	62.2	1.0	2250
16	72.7	74.0	71.2	72.7	• 7	4
17	68•6	69.8	66.5	68 • 5	•8	225° (Microphone Location Relative to Helicopte
18	65 • 7	66.9	63.3	65 • 6	•9	MILLIOPHONE ZOCAMON
19	78.4	81.8	74.0	78 • 1	1.6	Rolation to Holisanto
20	67.9	69.7	65-4	67 • 8	1.0	MEIBINE TO HELLEDDIE
ខរ	64.3	67 • 4	62 • 1	64•1	1.3	•
22	72.8	76 • 4	69.2	72.5	1.7	
23	70 • 4	74.2	67.4	70 • 1	1 - 4	
24	79•3	81 • 6	76 • 7	79 • 1	1.3	
25	76•6	79•0	73.3	76 • 4	1.5	
26	76.9	79.2	74.3	76•7	1.2	
27	76 • 3	78.3	73.5	76.2	1 • 1	
28	74•8	76•7	71.8	74.6	1.3	
29	68 • 6	71.7	65.7	68+3	1.5	
30	60 • 6	63.5	56.8	60.2	1.9	
31	59 • <b>7</b>	64.2	54.8	59•0	2.5	
32	61 • 6	66 • 4	55 • 1	60 • 4	3 • 1	
33	60 • 6	66 • 1	52.9	59•6	2.9	
34	57 • 8	61.6	50.6	57 • 1	2.6	
35	51 • 4	54.5	46.7	50 • 8	2.4	
36	47.0	49.7	45.0	46.7	1.6	
37	45 • 0	45.0	45.0	45.0	•0	
38	45.0	45.0	45.0	45.0	•0	
39	45 • 0	45.0	45.0	45.0	•0	
40	45.0	45.0	45.0	45.0	•0	
DBA	79•6	81.5	76.9		1 - 1	
DBD	84.4	86.2	81.9		1.0	
OASPL	85.9	87.4	84.3	85 • 8	•8	

PNL.

PNLT

90.5

90.6

91.9

92.5

88.3

88.3

90.4

90.5

1.0

#### 5 FOOT HOVER TEST

į

PNLT

85.8

37.8

82.8

85.6

#### 1/3 OCTAVE NOISE LEVEL FREQUENCY SPECTRA

BELL 206 L

OCTOBER 14 1976

EVENT 20. 270 DEGREES. MICROPHONE 150 METERS EAST

1/3 OCTAVE BAND VS LEVEL (AVE OVER 19 SECONDS)
(DB RE 20 MICRO PA)

	ENERGY			ARITH.	STD	
BAND	AVERAGE	Max	MIN	AVERAGE	DEV	
14	76+0	77.5	75.0	75•9	•6	
15	63 • 6	65.3	62.3	63.5	•9	
16	73 +8	75 - 1	72.4	73.7	• 7	/80°
17	70 -8	72:7	68.7	70.8	• 9	
18	67.0	69.4	66-4	67.8	•8	Micmohomo Loc
19	75.5	76.3	74.2	75.4	•7	, metopment and
20	67.5	€8.9	65.8	67.4	• 9	180° (Microphone Loc Relative to He
21	65.2	66.8	62.5	65 • 1	•8	(10)
22	71.9	73.9	69 • 1	71.7	1.2	
23	68.3	70.5	64.9	68 • 1	1.4	
24	73 • 1	75.3	68∙5	72.8	1.7	
25	72.6	75 • 1	68.5	72.8	2.0	
26	71 • 1	73.9	66.3	70 - 7	2.0	
27	70.3	73.4	64.0	69.5	2.8	
28	66 • 9	70 • 7	60.2	66.2	2.6	
29	60 • 3	63.7	54.2	59.7	2.5	
30	55 • 3	61.7	50 • 5	54.2	2.8	
31	53 • 2	58 • 4	49.3	54.2	3 • 1	
32	55 • 1	59.4	50 • 3	54-4	2.5	
33	53 • 6	56.9	49.0	53+1	8.2	
34	50 • 6	53 • 0	47 - 1		1 • 7	
35	46 • 3	48.3	45.0	46.2	1 • 1	
36	45.0	45.2	45.0	45.0	- 1	
37	45.0	45.0	45.0	45+0	•0	
38	45.0	45.0	45.0	45.0	•0	
39	45 -0	45.0	45.0	45.0	•C	
40	45 • 0	45.0	45.0	45.0	•0	
DBA	73.7	76.6	70.0	73.4	3 • 7	
DBD	78 - 9	81.2	76.1	78.7	1.4	
OASPL	82.4	83.8	80.9	82.3	•8	
PNL	85.7	87 • 8	82.8	85.6	1.3	
	~			2 1		

5 FOUR HOVER TEST

1/3 OCTAVE NOISE LEVEL FREQUENCY SPECTRA

BELL 206 L

OCTOBER 14 1976

EVENT 21. 315 DEGREES, MICROPHONE 150 METERS EAST

1/3 OCTAVE BAND VS LEVEL (AVE OVER 19 SECONDS)
(DB RE 20 MICRO PA)

	ENERGY			ARITH.	STD	
BAND	AVERAGE	MAX	MIN	AVERAGE	DEV	
14	75.6	76.9	73 • 6	75•6	• 9	_
15	67 • 7	71.9	62 - 1	66 ₌ 8	2-7	/35°
16	72.3	74.4	69.5	72.2	1 - 1	
17	68•3	70.4	65 • 4	68 • 1	1 - 1	(Microphone Location) Relative to Helicopter)
18	64.3	66.7	62 • 3	64.1	1.2	Interphone Location
19	70 • 3	73.4	65 • 5	69.9	2.0	Doloto + Haliandon
20	67 • 4	69•5	65.0	67.3	1.0	Keletive to mericopier
21	65 • 4	67-1	63 • 8	65.3	• 7	,
22	<b>70 •</b> 3	71.7	68 - 0	70 - 1	1.3	
23	68 • 2	70.9	66 • 5	68 • 1	1 - 1	
24	73.5	75.7	70 • 6	73.2	1 • 4	
25	73 • 7	75.5	71.0	73.5	1.2	•
26	73.0	77.4	70 - 5	12.7	1 • 6	
27	71.6	76.3	68.0	71 - 1	2 • 1	
28	68 • 6	70.9	65 • 1	68.3	1.7	
29	63 • 3	66.7	58 • 5	62.7	2.2	
30	57 • 1	60.0	54-1	56.9	1-4	
31	57.2	60 • 4	50 - 8	56 • 3	3.0	
32	58 • 3	62.2	51.3	56.9	3.7	
33	57 • 2	61.8	51 • 6	56.0	3 • 3	
34	54 • 4	57.6	51.3	53•9	2.0	
35	50 • 6	55.4	45 - 3	49.8	2.6	
36	46 • 2	49.6	45.0	45.9	1 - 4	
37	45 • 0	45.2	45.0	45.0	•0	
38	45.0	45.0	45.0	45.0	• 0	
39	45 • 0	45.0	45.0	45.0	•0	
40	45.0	45.0	45.0	45.0	•0	
DBA	75.1	77.2	73 • 1	75.0	<b>.</b> e	
DBD	80.0	81.5	78.3	79.9	• 7	
OASPL	82.3	84.0	81.3	82.2	• 5	
PNL	86.7	88.7	85 - 1	86 • 7	•8	
PNI.T	87 • 0	89.5	85 - 1	86.9	• 9	

500 FOOT HOVER TEST

1/3 OCTAVE NOISE LEVEL FREQUENCY SPECTRA

BELL 206 L

OCTOBER 14 1976

EVENT 53. O DEGREES. MICROPHONE 150 METERS WEST

1/3 OCTAVE BAND US LEVEL (AUE OVER 19 SECONDS)
(DB RE 20 MICRO PA)

	ENERGY			ARITH.	STD
BAND	AVERAGE	MAX	MIN	AVERAGE	DEV
14	79 • 6	81.6	76-4	<b>7</b> 9.3	1 + 5
15	67.0	69•0	64 • 1	66 • 8	1 • 4
16	76 - 1	78•3	71.8	75.8	1.6
17	74•8	78.2	66 • 1	74.2	2.5
18	71 - 1	74.3	64.7	70.7	2.0
19	68•7	70 • 7	64.2	68•3	1.8
80	64.5	68 • 5	59•7	63.9	2.3
ខរ	61.2	65.0	55.0	60 - 4	2.7
22	66 • 7	68.3	64.6	66•6	1 - 0
23	65.5	67.2	63.3	65 • 4	1.0
24	70 • 4	72.2	66.1	70 • 1	1 • 4
25	65 • 4	68-3	60.8	65.0	1.8
26	62.3	65 • 8	58.0	81.9	1.9
27	68 • 4	71 • 4	63.4	68 • 0	2.0
28	64 • 0	67.6	59.6	63.7	1.8
29	66 • 5	70 • 5	62.0	66•0	2-2
30	64.3	68.9	59.6	63.7	2.3
31	63.2	68 • 3	58 . 4	62.6	2.2
32	60 • 3	65 • 0	55 : 9	59.7	2.3
33	57 • 4	62.6	52.9	56.7	2-4
34	52.0	56•9	48.2	51.5	2.1
35	47 • 8	52 • 1	45.0	47 - 4	1.6
36	45 • 1	46 • 3	45.0	45 • 1	•3
37	45.0	45.0	45.0	45 • 0	•0
38	45 - 0	45 - 0	45.0	45-0	• C
39	45.0	45.0	45.0	45.0	•0
40	47 - 1	47 • 5	46 - 4	47 • 1	• 3
DBA	72•9	76 • 5	69+3	72•6	1.6
DBD	77 + 1	80 • 4	74.0	76.9	1 - 4
OASPL	81 • 7	83.6	79.4	81.6	1 - 1
PNL	84.3	87.2	81.3	84-1	1 • 3
PNLT	84+5	87.2	81.3	84.3	1 : 4

270 Microphone Location Relative to Helicopter

500 FOOT HOVER TEST

1/3 OCTAVE NOISE LEVEL FREQUENCY SPECTRA

BELL 206 L

OCTOBER 14 1976

EVENT 53, O DEGREES, MICROPHONE 150 METERS EAST

1/3 OCTAVE BAND VS LEVEL (AVE OVER 19 SECONDS)
(DB RE 20 MICRO PA)

	ENERGY			ARITH.	STD	
BAND	AVERAGE	MAX	WIN	AVERAGE	DEV	
14	84.0	86.3	82.0	83.9	1 - 1	
15	68.9	71.5	66.6	68 • 7	1 • 4	0.0
16	73.7	77.5	68.0	72.9	2.8	90°
17	75.7	77 • 6	71.6	75 • 4	1 • 4	1
18	73.3	77.4	68 • 1	72.6	2.5	/ Microphone Lo
19	69.7	71.7	66 • 4	69.5	1.2	
20	65 • 8	68.8	61.6	65.4	1.7	Microphone Lo Relative to Hell
21	64.2	68.2	59.0	63.7	2.2	
22	71 •0	73.6	67.9	70.7	1.5	
23	67.7	69.4	65.2	67.5	1 • 3	
24	70.2	72.6	65.8	70.0	1 - 6	
25	62 • 3	65•5	59 • 5	62.0	1 - 4	
26	71.0	73.2	68 • 3	70.8	1 • 3	
27	<b>68 • 7</b>	71-4	65.5	68 • 4	1.5	
88	69•8		67.0	69.7	1.2	
29	67 • 9	70 - 4	64 • 4	67.6	1 • 5	
30	66 • 5	69.2	63.0	66.2	1.6	
31	64 • ₺	68 • O	60,9	64.2	1 -8	
32	61.5	64.6	58 • 8	61.2	1 • 6	
33	<b>57 + 3</b>	60.5	53.9	57.0	1.6	
34	54 • 1	56 • 7	50 • 9	53.9	1 • 4	
35	49.7	51.9	47.4	49.5	1.2	
36	45.7	47.2	45 • 0	45.7	• 7	
37	45.0	45.0	45 • 0	45.0	• O	
38	45 • 0	45.0	45.0	45.0	•0	
39	45 • 0	45.0	45.0	45.0	• O	
40	45 • 0	45.0	45.0	45.0	• 0	
DBA	<b>75.</b> 0	77.1	72.4	74.8	1 • 3	
DBD	78•9	80 • 3	76 • 3	78.8	1.2	
0ASPL	83.9	85.5	81.8	83.8	• 9	
PNL	86 • 3	88.0	84 - 1	86 • 1	1 • 1	

PNLT

86.3

0.88

84-1

## TABLE D-VIII. 500 FOOT HOVER TEST

#### 1/3 OCTAVE NOISE LEVEL FREQUENCY SPECTRA

BELL 206 L

OCTOBER 14 1976

EVENT 53. O DEGREES. CENTERLINE MICROPHONE ( SOFT SITE )

1/3 OCTAVE BAND VS LEVEL (AVE OVER 19 SECONDS)
(DB RE 20 MICRO PA)

	ENERGY			ARITH.	STD
BAND	AVERAGE	MAX	MIN	AVERAGE	DEV
14	80 • 5	83.8	76.4	0.08	2.1
, 15	71.9	.7.4 • 7	68•5	71.6	1 = 6
16	84 • 6	87 • 3	80.9	84•3	1 • 6
17	69 • 1	73 • 4	63•5	68 • 4	2 • 4
18	66 • 5	71.2	62.2	65.9	2.2
19	67 • 3	72.0	64.8	67.0	1 • 7
20	69•2	74.8	65•7	<b>68•8</b>	1 • 9
21	70 - 1	73.8	68.2	69•8	1 • 3
22	74.9	76.8	73.3	74.8	• 8
23	66 • 8	69•0	64+9	66•7	1 • 1
24	68•6	70.8	66.3	68 • 4	1 • 3
25	72.1	73.5	69.6	72.0	• 9
26	70.5	72.7	68 • 7	70 • 3	1 • 1
27	70 • 5	72.6	67.0	70.3	1 • 4
28	70 • 4	71.7	67.5	70.3	• 9
29	68.8	69.9	66.7	68.7	• 9
30	66 • 4	67.8	63.9	56.3	1 • Q
31	64 • 4	65•7	62.3	64.3	• 9
32	63.3	64.9	61 • 1	63.2	•9
33	60 • 7	63.0	58.8	60•6	1.0
34	56.9	58•6	55 • 1	56.8	•9
35	53.0	55.0	51.1	52.9	1.0
36	48 - 1	50 • 5	46.3	48.0	1 • 0
37	45.0	45.2	45.0	45.0	• 1
38	45.0	45.0	45.0	45.0	•0
39	45.0	45.0	45.0	45.0	• 0
40	45 • 0	45.0	45.0	45.0	•0
DBA	76.2	77.7	74.7	76.2	8•
DBD	80 • 6	81.7	79.3	80.6	•6
OASPL	85.7	87.5	83.9		1 + 1
PNL	87 • 2	88.4	85 • 8	87.1	• 7
PNLT	87.2	88 • 4	85.8	87.1	• 7

Helicopter Located
Directly Overhead

## TABLE D-VIII. Halicopter Noise Level Data BELL 206L OCTOBER 14, 1976

		, MIX RINS	Noise Level	l- JBA ne ao	mPa.
HELICOPTER OPERATON	run Num b <i>er</i> q	MICR.O	THE WEST	OFFSET TO	HONE
5Ft. HOVER O°	14 22	75.0 76.0	88.5 88.5	84.5 86.8	80.0 83.0 (°)
5Ft. Hover 45°	15 23	79.5 75.0	90.5 88.5 35°)	85.0 85.5 (4	81.5 81.8 5°)
5Ft. Hover 90°	16 24	78.5 78.0	86.3 86.5 m°)	81.5 81.0	77.0 76.0 °)
5 Ft. HOVER 135°	17 25	82.3 86.0	45.0 45.0 35°)	86.0 85.0 (3)	82.5 78.3 5°)
5F4 HOVER 180°	18	77.8	<b>87.3</b>	83.5 (a	<b>79.5</b> °)
SFE HOVER 225°	19	78.5 (4	<b>85.0</b> 5°)	89.0	<b>81.0</b> 5°)
5 FL Hover 270°	20	48.8	<b>85.8</b> 5°)	87.0	<b>77.5</b> 30°)
5 Ft. HOVER 3 15°	21	72.8	<b>85.8</b> (5°)	<b>87.0</b>	<b>82.5</b> 15°)
500Ft HOVER	53 53	77.5 76.5 (2%°)	78.0	77.5 # 78.8	83.3 77.0 (90°)
5 co Ft HOVER					·

## Halicopter Noise Level Data

BELL 206 L

OCTUBER 14, 1976

				- deAnezon	Pa
( ~ ( · · · · · · · · · · · · · · · · ·	RUN	MICRO	PHONE	OFFSET TOY	ONE NE EAST
OPERATION	NUMBER		THE WEST	CENTER LINE	
OPERMINA		13077			
3° GLIDE SLOPE					-
6°	46	73.8	76.8	76.8	71.0 72.0
GLIDE	47	78.5	75.8	75.0	
SLOPE	49	81.3	78.5	78.2	74.8
90	54	76.5	76.8	75.8	73.0
GLIBE SLOPE	55	723	76.0	75.8	71.5
70 MPH	59	74.0	79.0	79.0	74.5
LEVEL	Ţ.	72.3	75.8	76.8	75.0
FLYOVER	60	74.3	79.0	79.61	72.3
106 MPH	63	73.3	75.5	76.3	73.0
LEVEL	65	73.0	748	76.3	74.0
PLYOVER	46	73.3	748	740	73.0
					<u> </u>
118MPH	67	75.5	81.3	83.5	73.3
LEVEL	68	73.8	75.5	74.3	73.8
	40	73.8	78.0	78.0	73.0
FLYOVE	70	72.8	78.0	76.0	74.5

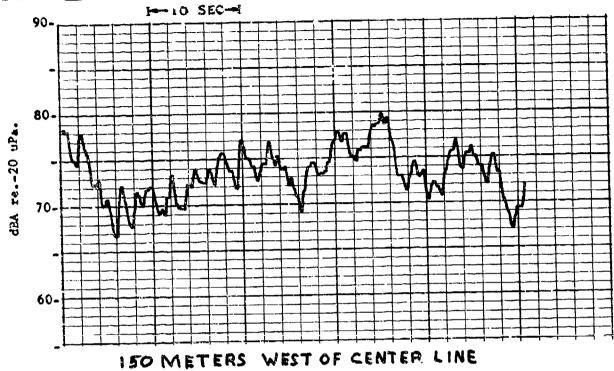
## TABLE D-VIII Helicopten Noise Level Data

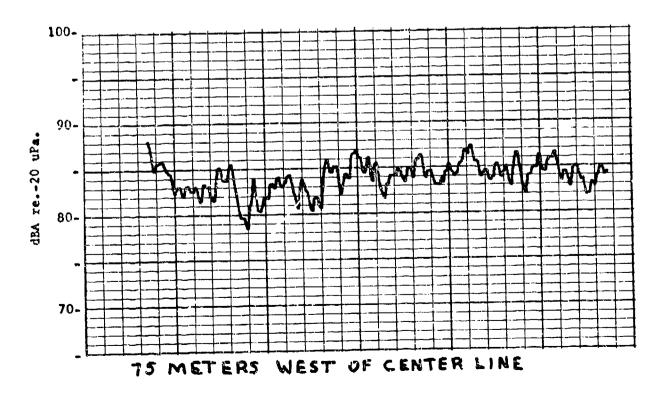
BELL 206-L

OCTOBBA 14, 1976

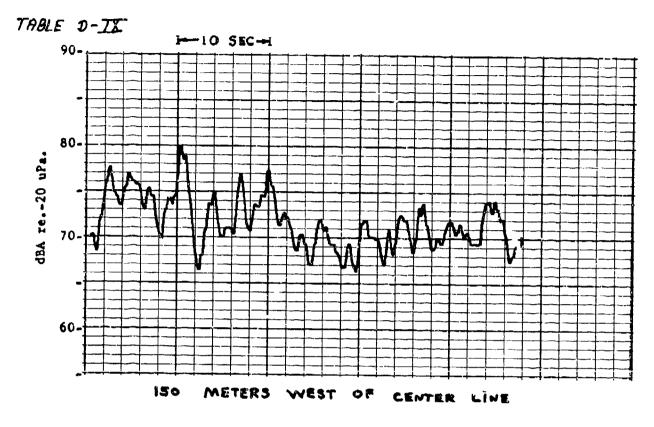
***	· · · · · · · · · · · · · · · · · · ·	MAX. N/T	PHONE LAVE	- dBA ne ac	
HELI COPTER OPER ATION	RUN Number	OFFSET TO	O THE WEST	OFFSET FO	THE EAST
130MAH					
LEVEL	7/	760	75.8	75.3	74.0
FLYOVER	_	768	76.3	74.5	72.3
	73	73.0	75.6	77.3	74.8
145 MAH	74	75.5	76.8	77.3	760
LEVEL	76	75.0	j i		
FLYOVER			77.5	77.3	76.0
LEVEL					
FLYOVER	j				
LEVEL FLYOVER					and the second s
LEVEL					
· ·					
LEVEL FLY OVER					aller allerstation som et suggestatige out

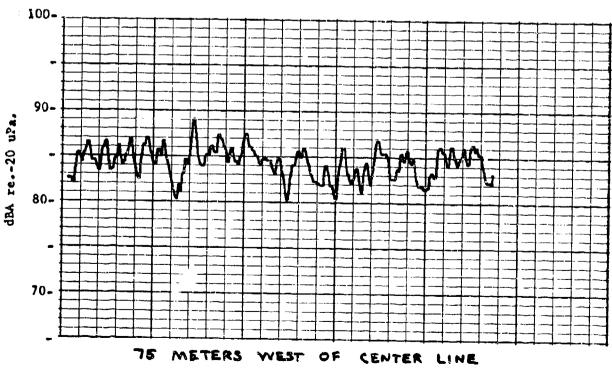






NOISE LEVEL TIME HIS TORIES BELL 206-L HELICOPTER 90° HOVER - 5 FT



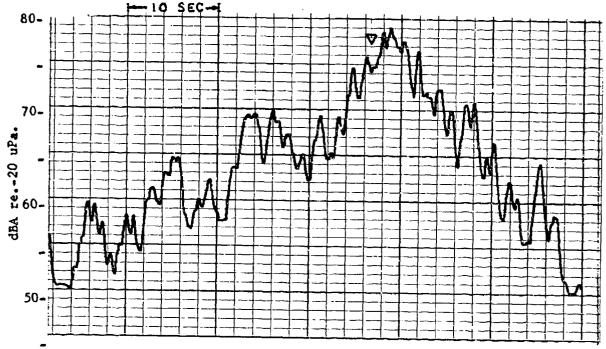


NOISE LEVEL TIME HISTORIES
BELL 206 L HELICOPTER
180° HOVER - 5 FT.

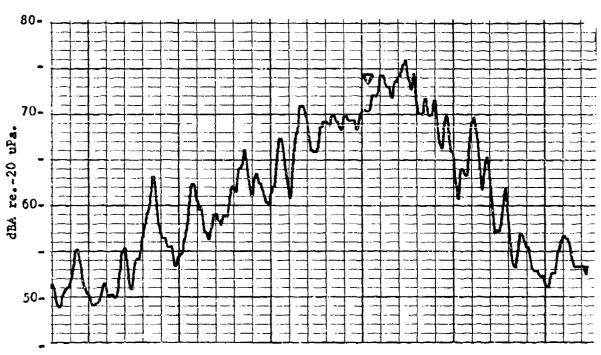
RUN 18

TABLE D-ZX





150 METERS WEST OF FLICHT PATH



DIRECTLY UNDER FLIGHT PATH

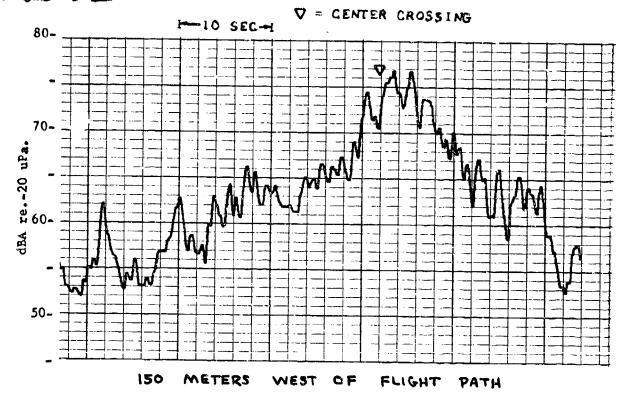
NOISE LEVEL TIME HISTORIES

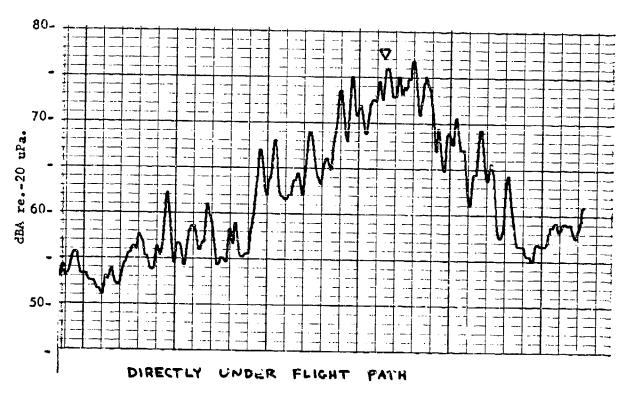
BELL ZOG L HELICOPTER

G. APPROACH

RUN 47

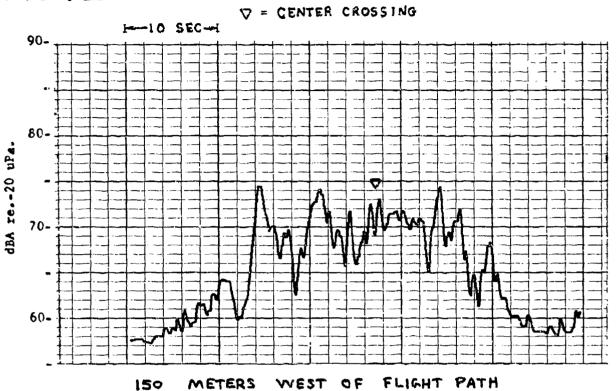
TABLE D-IX

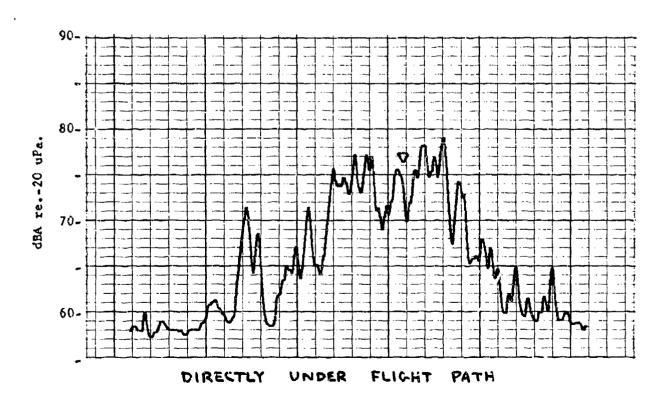




NOISE LEVEL TIME HISTORIES
BELL ZOG L HELICOPTER
9° APPROACH

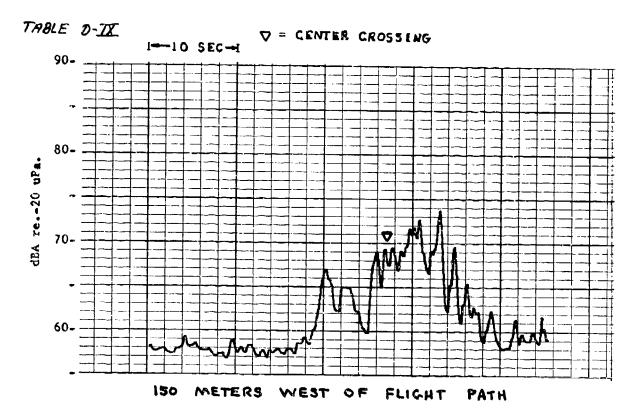
TABLE D-IX

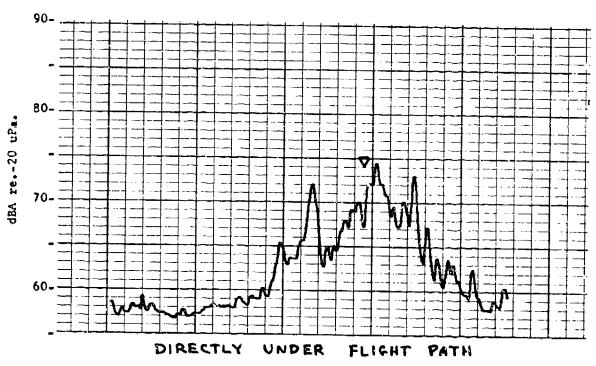




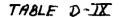
NOISE LEVEL TIME HISTORIES
BELL ZOG L HELIC.PTER
LEVEL FLYOVER - 70 MPH

RUN 61

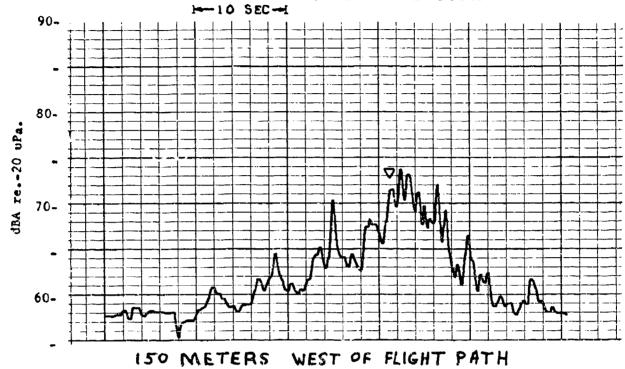


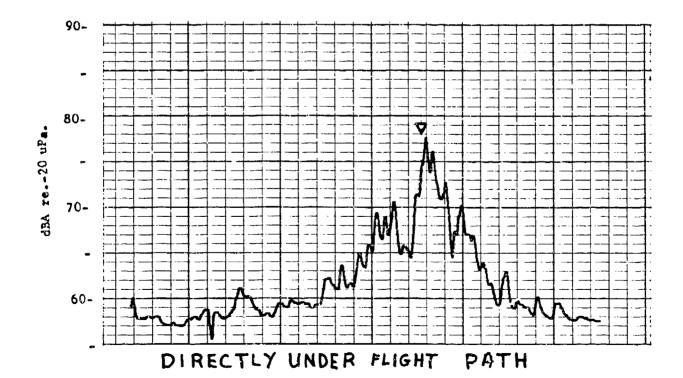


NOISE LEVEL TIME HISTORIES
BELL 206 L HELICOPTER
LEVEL FLYDVER - 106 MPH



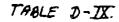


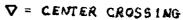


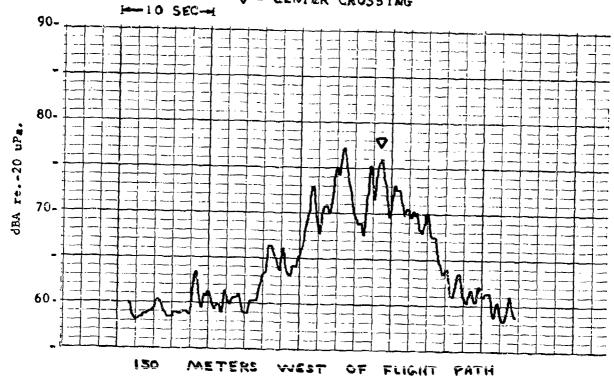


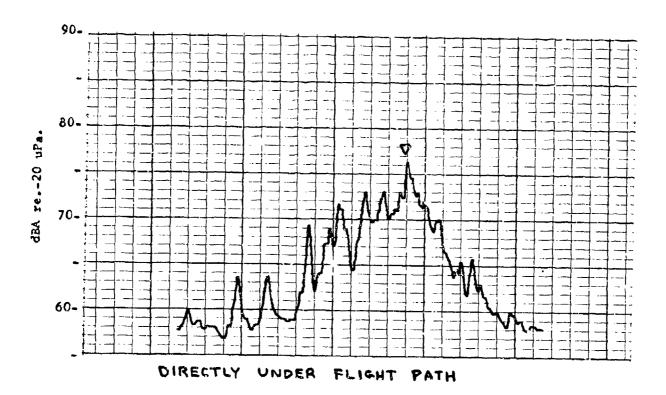
NOISE LEVEL TIME HISTORIES BELL 206-L HELICOPTER LEVEL FLYOVER 118 MPH

**RUN 69** 





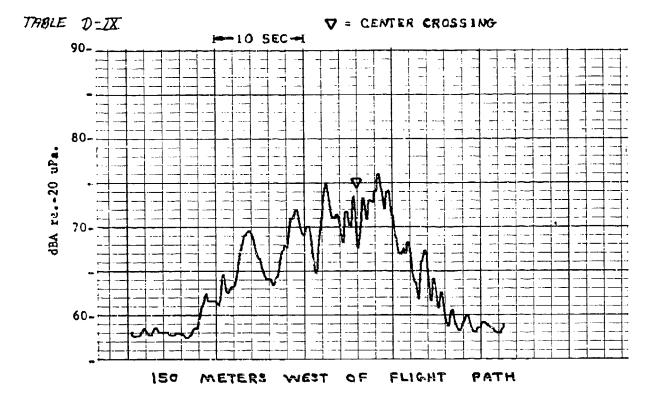


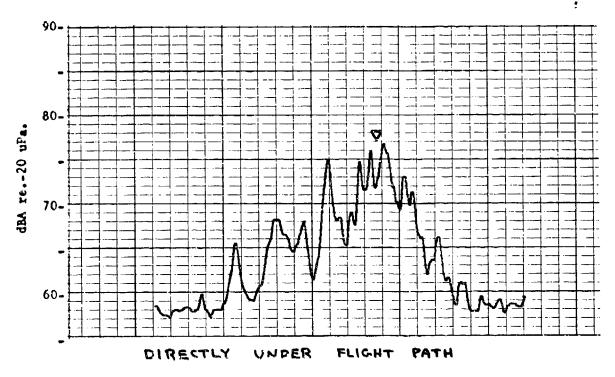


NOISE LEVEL TIME HISTORIES

BELL ZOG L HELICOPTER

LEVEL FLYOVER - 130 MPH RUN TZ





MELL 206 L HELICOPTER
LEVEL FLYOVER - 145 MPH

# SUPPLEMENTARY

# INFORMATION

1. Report No.	2. Government Accession No.	3. Recipient's Caraing No.				
FAA-RD-77-57, I						
	Noise Measurements	S. Report Date April 1977				
	ita Report	6. Performing Organization Code				
	r Models: Hughes 300-C,	ARD-550				
Hughes 500-C, Beil 4	7-G, Bell 206-L	9 Partarining Organization Report No.				
H. C. True, E. J. Rick	ley, and R. M. Letty					
9. Performing Organization Neme and Address		10. Work Unit No. (TRAIS)				
Department of Transpo Federal Aviation Admi		11. Contract or Grant No.				
Systems Research and		Confidence of Gram No.				
Washington, D.C.	20591	13. Type of Report and Period Covered				
12. Sponsoring Agency Name and Address Department of Transpo	ortation	Data Report				
Federal Aviation Admi						
Systems Research and		14. Sponsoring Agency Code				
Washington, D.C.  15. Supplementary Notes **	20591	ARD-550				
Acoustic data acquired and processed into format by "Noise Measure- ment and Assessment Laboratory" Transportation Systems Center, Cambridge, Massachusetts						
16. Abstract						
program was to provide a data base for a possible helicopter noise certification rule. The noise data presented in this two volume report is primarily intended as a means to disseminate the available information. Only the measured data is presented in this report. All FAA/DOT data analysis and comparisons will be presented in a later report which is scheduled for distribution in July,1977.  The eight helicopters tested during this Helicopter Noise Test Program constituted a wide range of gross weights and included participation from several helicopter manufacturers. The helicopter models used in this test program were the Hughes 300C, Hughes 500C, Bell 47-G, Bell 206-L, Bell 212 (UH-IN), Sikorsky S-61 (SH-3A), Sikorsky S-64 "Skycrane" (CH-54B), and Boeing Vertol "Chinook" CH-47 Volume I contains the measured noise levels obtained from the first four helicopters while Volume II contains the data from the remaining four.  The test procedure for each helicopter consisted of obtaining noise data during hover, level flyover, and approach conditions. The						
data presented in thi band spectra, EPNL, I	Is report consists of PNL, dBA, dBD and OAS	f time histories, 1/3-octave SPL noise levels.				
17. Key Words	18. Distributio	•				
Helicopter Noise Level Hover; Level Flyover; Glide Slope; Time His EPNL, PNL, dBA, dBD a	Approach; public stories; nical	document is available to the through the National Tech-Information Service gfield, Virginia 22151				

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UNCLASSIFIED

21. No. of Pages

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22. Price

20. Security Classif. (of this page)

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